Accton

Making Partnership Work

CheetahAccess™ Internet Gateway AC-IG1004/AC-IG1008

User Guide

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User Guide

CheetahAccess™ Internet Gateway

with 4/8 10BASE-T / 100BASE-TX (RJ-45) LAN Ports,
and 1 10BASE-T / 100BASE-TX (RJ-45) WAN Port

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Chapter 1: Introduction

Congratulations on your purchase of the CheetahAccess™ Internet Gateway. Accton is proud to provide you with a powerful yet simple communication device for connecting your local area network (LAN) to the Internet. For those who want to surf on the Internet at the lowest possible cost, this Internet Gateway provides a convenient and powerful solution.

About the CheetahAccess Internet Gateway

The CheetahAccess Internet Gateway provides Internet access to multiple users by sharing a single-user account. The most outstanding feature of the CheetahAccess Internet Gateway is the dual-port WAN interface which allows you to connect to an xDSL or Cable modem, ISDN TA or PSTN analog modem. The CheetahAccess Internet Gateway provides extensive firewall protection and Virtual Private Network (VPN) services. It also provides print services for any client attached to a LAN port.

The CheetahAccess Internet Gateway supports dial-on-demand for ISDN/PSTN service, automatically connecting to the Internet when there are requests and terminating the connection if no further requests occur. This dual-port design also supports fail-over Internet access through the secondary WAN port (i.e., the serial port can be used for primary or backup Internet access).

This new CheetahAccess Internet Gateway technology provides many cost-effective functions and management benefits. It is simple to configure and can be up and running in minutes.

Features and Benefits

- Internet connection to xDSL or Cable modem via a 10/100 Mbps WAN port
- Internet connection to ISDN TA or PSTN modem via an RS-232 console port
- Local network connection via 10/100 Mbps Ethernet ports
- Built-in Print Server for any client attached to the LAN
- DHCP for dynamic IP configuration, and DNS for domain name mapping
- Firewall with client privileges, hacker prevention, and NAT
- NAT also enables multi-user access with a single-user account, and virtual server functionality (providing protected access to Internet services such as Web, FTP, mail and Telnet)
- Virtual Private Network support using PPTP, L2TP or IPSec pass-through
- User-definable application sensing tunnel supports applications requiring multiple connections
- Supports CHAP authentication protocol for dial-up identification
- Supports PPP dial-in connection using standard dial-up program
- Easy setup through a Web browser on any operating system that supports TCP/IP
- Compatible with all popular Internet applications

Applications

Many advanced applications are provided by the CheetahAccess Internet Gateway, such as:

- **LAN Access**

  The CheetahAccess Internet Gateway provides connectivity to 10/100 Mbps devices, making it easy to create a network in small offices or homes.

- **Internet Access**

  This device supports Internet access through an xDSL, Cable, ISDN or PSTN connection. Since many DSL providers use PPPoE to establish communications with end users, the CheetahAccess Internet Gateway includes a built-in client for this protocol, eliminating the need to install this service on your computer.

- **Shared IP Address**

  The CheetahAccess Internet Gateway provides Internet access for up to 253 users with a shared IP address. Using only one ISP account, multiple users on your network can browse the Web at the same time.

- **Virtual Server**

  If you have a fixed IP address, you can set up the CheetahAccess Internet Gateway to act as a virtual host for network address translation. Remote users access various services at your site using a constant IP address. Then, depending on the requested service (or port number), the CheetahAccess Internet Gateway can route the request to the appropriate server (at another internal IP address). This secures your network from direct attack by hackers, and provides more flexible management by allowing you to change internal IP addresses without affecting outside access to your network.

- **User-Definable Application Sensing Tunnel**

  You can define special applications that require multiple connections such as Internet gaming, videoconferencing, and Internet telephony. The CheetahAccess Internet Gateway can then sense the application type and open a multi-port tunnel for it.

- **DMZ Host Support**

  Allows a networked computer to be fully exposed to the Internet. This function is used when the special application sensing tunnel feature is insufficient to allow an application to function correctly.

- **Security**

  The CheetahAccess Internet Gateway supports security features that can deny Internet access to specified users, or filter all requests for specific services the administrator does not want to serve. The CheetahAccess Internet Gateway's firewall can also block common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Snork Attack, TCP null scan, and TCP SYN flooding.

- **Virtual Private Network**

  The CheetahAccess Internet Gateway supports three of the most commonly used VPN protocols – PPTP, L2TP and IPSec. These protocols allow remote users to establish a secure connection to their corporate network. If your service provider supports VPNs, then any of these protocols can be used to create an authenticated and encrypted tunnel for passing secure data over the Internet (i.e., a traditionally shared data network). The VPN protocols supported by the CheetahAccess Internet Gateway are briefly described below.

  - Point-to-Point Tunneling Protocol – Provides a secure tunnel for remote client access to a PPTP security gateway. PPTP includes provisions for call origination and flow control required by ISPs.
  - Layer Two Tunneling Protocol – Includes most of the features provided by PPTP, but has less overhead and is more suited for managed networks.
  - IP Security – Provides IP network-layer encryption. IPSec can support large encryption networks (such as the Internet) by using digital certificates for device authentication.

Chapter 2: Installation

Before installing the CheetahAccess Internet Gateway, verify that you have all the items listed under “Package Contents.” If any of the items are missing or damaged, contact your local Accton distributor. Also be sure that you have all the necessary cabling before installing the CheetahAccess Internet Gateway. After installing the CheetahAccess Internet Gateway, refer to the Web-based configuration program in Chapter 4 for information on configuring the router.

Package Contents

After unpacking the CheetahAccess Internet Gateway, check the contents of the box to be sure you have received the following components:

- CheetahAccess Internet Gateway
- One Power Adapter (AC-IG1004), One Power Cord (AC-IG1008)
- One CAT-5 Ethernet cable
- Four rubber feet
- Installation CD with complete user guide
- Quick Installation Guide
- Accton Registration Card

Immediately inform your dealer in the event of any incorrect, missing or damaged parts. If possible, please retain the carton and original packing materials in case there is a need to return the product.

Please fill out and return the Registration Card to Accton or register on Accton’s Web site at www.accton.com. The CheetahAccess Internet Gateway is covered by a limited lifetime warranty.

Description of Hardware

The CheetahAccess Internet Gateway can be connected to the Internet or to a remote site using its RJ-45 WAN port or RS-232 serial port. It can be connected directly to your PC or to a local area network using any of the Fast Ethernet LAN ports. It can also function as a print server.

Access speed to the Internet depends on your service type. Full-rate ADSL can provide up to 8 Mbps downstream and 640 Mbps upstream. G.lite (or splitterless) ADSL provides up to 1.5 Mbps downstream and 512 Kbps upstream. Cable modems can provide up to 36 Mbps downstream and 2 Mbps upstream. ISDN can provide up to 128 Kbps when using two bearer channels. And PSTN analog connections can now run up to 56 Kbps. However, you should note that the actual rate provided by specific service providers may vary dramatically from these upper limits.

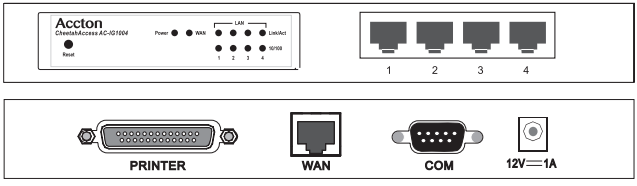
Although access speed to the Internet is determined by the modem type connected to your CheetahAccess Internet Gateway, data passing between devices connected to your local area network can run up to 100 Mbps over the Fast Ethernet ports.

The CheetahAccess Internet Gateway includes an LED display on the front panel for system power and port indications that simplifies installation and network troubleshooting. It also provides 4/8 RJ-45 LAN ports on the front panel, as well as one RJ-45 WAN port, one RS-232 serial port and one parallel printer port on the rear panel. These ports are described below.

- 4/8 RJ-45 ports for connection to a 10BASE-T/100BASE-TX Ethernet Local Area Network (LAN). These ports can auto-negotiate the operating speed to 10/100 Mbps, the mode to half/full duplex, and the pin signals to MDI/MDI-X (i.e., allowing these ports to be connected to any network device with straight-through cable). These ports can be connected directly to a PC or to a server equipped with an Ethernet network interface card, or to a networking device such as an Ethernet hub or switch. Port 8 on the Accton CheetahAccess Internet Gateway offers an MDI-X or MDI option by way of separate RJ-45 sockets.
- One RJ-45 port for connection to an xDSL or Cable modem. This port can auto-negotiate the operating speed to 10/100 Mbps and the mode to half/full duplex. This port only supports MDI-X pin signals, so you will have to use either straight-through or crossover cable depending on the port type used on the modem.
- One RS-232 serial port to connect to an ISDN Terminal Adapter (TA) or to a PSTN analog modem.
- One parallel printer port that can be connected to a printer. This printer can then be shared by any LAN users.

The following figure shows the components of the CheetahAccess Internet Gateway:

4-port CheetahAccess Internet Gateway



8-port CheetahAccess Internet Gateway

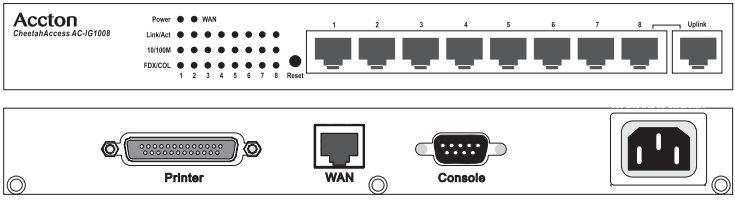


Figure 2-1. Front and Rear Panels

Item	Description
Reset Button	Use this button to reset the power and restore the default factory settings.
LEDs	Power, WAN and LAN port status indicators. (See “Verify Port Status” on page 2-7.)
LAN Ports	Fast Ethernet ports (RJ-45). Connect devices on your local area network (such as a PC, hub or switch) to these ports.
Printer Port	Parallel port (25-pins, D-type, female). Connect the shared printer to this port.
WAN Port	WAN port (RJ-45). Connect your Cable modem, xDSL modem, or an Ethernet router to this port.
COM Port	Serial port (9-pins, D-type, male). Connect your ISDN TA or 56K analog modem to this port.
Power Inlet	Connect the included power adapter to this inlet. **Warning:** Using the wrong type of power adapter may cause damage.

System Requirements

You must have an ISP that meets the following minimum requirements:

- Internet access from your local telephone company or Internet Service Provider (ISP) using an xDSL modem, Cable modem, ISDN TA, or PSTN analog modem. You may also have access over the telephone system to an analog modem at another site.
- A PC using a fixed IP address or dynamic IP address assignment via DHCP, as well as a Gateway server address and DNS server address from your service provider.
- A computer equipped with a 10 Mbps, 100 Mbps, or 10/100 Mbps Fast Ethernet card, or a USB-to-Ethernet converter.
- TCP/IP network protocol installed on each PC that needs to access the Internet.
- A Java-enabled Web browser, such as Microsoft Internet Explorer 5.0 or above or Netscape Communicator 4.0 or above installed on one PC at your site for configuring the CheetahAccess Internet Gateway.

Connect the System

The CheetahAccess Internet Gateway can be positioned at any convenient location in your office or home. There are no special wiring or cooling requirements. You should, however comply with the following guidelines:

- Keep the CheetahAccess Internet Gateway away from any heating devices.
- Do not place the CheetahAccess Internet Gateway in a dusty or wet environment.

You should also remember to turn off the power, remove the power cord from the

outlet, and keep your hands dry when you install the CheetahAccess Internet Gateway.

Basic Installation Procedure

1. **Connect the LAN:** You can connect the CheetahAccess Internet Gateway to your PC, or to a hub or switch. Run Ethernet cable from one of the LAN ports on the front of the CheetahAccess Internet Gateway to your computer's network adapter or to another network device.
2. **Connect the WAN:** Prepare an Ethernet cable for connecting the CheetahAccess Internet Gateway to a Cable/xDSL modem or Ethernet router. Prepare a serial cable for connecting the CheetahAccess Internet Gateway to an ISDN TA or PSTN modem.
3. **Connect your printer:** Use standard parallel printer cable to connect your printer to the printer port on the CheetahAccess Internet Gateway.
4. **Power on:** Connect the power adapter to the CheetahAccess Internet Gateway.

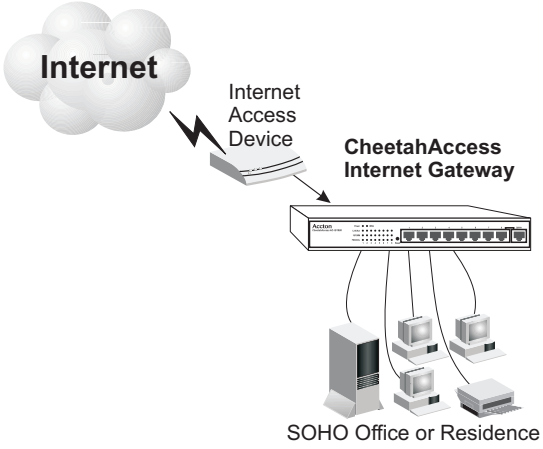


Figure 2-2. Connecting the CheetahAccess Internet Gateway

Attach to Your Network Using Ethernet Cabling

The 4/8 LAN ports on the CheetahAccess Internet Gateway can auto-negotiate the connection speed to 10 Mbps Ethernet or 100 Mbps Fast Ethernet, as well as the transmission mode to half-duplex or full-duplex. The LAN ports on the AC-IG1004 Gateway support auto-configuration for pin signals (auto-MDI/MDI-X) that allows you to use straight-through cable for connecting the CheetahAccess Internet Gateway to any network device. Each port on the AC-IG1008 Gateway contains a built-in wiring crossover (MDI-X) that allows for the use of straight-through twisted-pair cable for connections to devices without built-in crossover ports. The 8-port CheetahAccess Internet Gateway also provides a straight-through (MDI)

Uplink port making it convenient to connect straight-through cable from the CheetahAccess Internet Gateway to a crossover port on another switch or hub. Port 8 on the AC-IG1008 Gateway offers an MDI-X or MDI option by way of separate RJ-45 sockets. (See Appendix B for details on wiring.)

Use twisted-pair cable to connect any of the 4/8 LAN ports on the CheetahAccess Internet Gateway to an Ethernet adapter on your PC. Otherwise, you can cascade any of the LAN ports on the CheetahAccess Internet Gateway to an Ethernet hub or switch, and then connect your PC or other network equipment to the hub or switch. When inserting an RJ-45 plug, be sure the tab on the plug clicks into position to ensure that it is properly seated.

Warning: Do not plug a phone jack connector into any RJ-45 port. This may damage the CheetahAccess Internet Gateway. Instead, use only twisted-pair cables with RJ-45 connectors that conform with FCC standards.

Notes: **1.** Use 100-ohm shielded or unshielded twisted-pair cable with RJ-45 connectors for all connections. Use Category 3, 4 or 5 for connections that operate at 10 Mbps, and Category 5 for connections that operate at 100 Mbps.

2. Make sure each twisted-pair cable does not exceed 100 meters (328 feet).

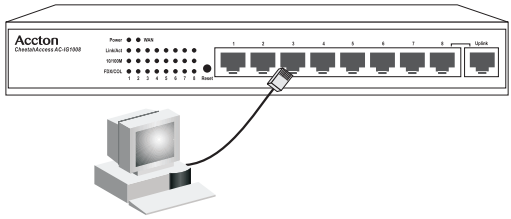


Figure 2-3. Making LAN Connections

Attach the CheetahAccess Internet Gateway to the Internet

If Internet services are provided through an xDSL or Cable modem, use unshielded or shielded twisted-pair Ethernet cable (Category 3 or greater) with RJ-45 plugs to connect the broadband modem directly to the WAN port on the CheetahAccess Internet Gateway. Use either straight-through or crossover cable depending on the port type provided by the modem (see Appendix B). For ISDN or PSTN service, attach the access device to the RS-232 serial port on the CheetahAccess Internet Gateway.

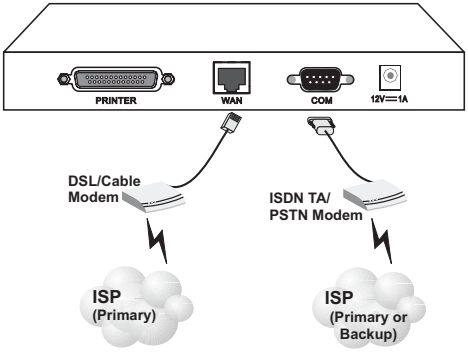


Figure 2-4. Making WAN Connections

Note: When connecting to the WAN port, use 100-ohm Category 3, 4 or 5 shielded or unshielded twisted-pair cable with RJ-45 connectors at both ends for all connections.

Connect a Printer

If you connect a printer to the CheetahAccess Internet Gateway, all the computer users connected to your LAN can have access to this printer. Connect a standard parallel printer cable to the Printer port on the CheetahAccess Internet Gateway, and configure the printer server as described on page 6-1.

Connect the Power Adapter

Plug the power adapter into the power socket on the CheetahAccess Internet Gateway, and the other end into a power outlet. Check the indicator marked Power on the front panel to be sure it is on. If the Power indicator does not light up, refer to Troubleshooting in Appendix A.

Verify Port Status

Check the power and port indicators as shown in the following table.

LED	Condition	Status
Power (Green)	On	CheetahAccess Internet Gateway is receiving power.
WAN (Green)	On	The WAN port has established a valid network connection.
	Flashing	The WAN port is transmitting or receiving traffic.
Link/Act (Green)	On	The indicated LAN port has established a valid network connection.
	Flashing	The indicated LAN port is transmitting or receiving traffic.
10/100 (Amber)	On	The indicated LAN port is operating at 100 Mbps.
	Off	The indicated LAN port is operating at 10 Mbps.
FDX/COL (8-port Internet Gateway)	On	The indicated LAN port is operating in full-duplex mode.
	Flashing	A collision occured on the indicated LAN port.

Chapter 3: Configuring Client PCs

TCP/IP Configuration

To access the Internet through the CheetahAccess Internet Gateway, you must configure the network settings of the computers on your LAN to use the same IP subnet as the CheetahAccess Internet Gateway. The default network settings for the CheetahAccess Internet Gateway are:

IP Address: 192.168.2.1
Subnet Mask:255.255.255.0

Note: These settings can be changed to fit your network requirements, but you must first configure at least one computer as described in Chapter 5 to access the CheetahAccess Internet Gateway's Web configuration interface. (See Chapter 4 for information on configuring the CheetahAccess Internet Gateway.)

If you have not previously configured TCP/IP for your computer, refer to "Installing TCP/IP Protocol in Your PC" on page 5-1.

All PCs connected to the CheetahAccess Internet Gateway must be set to the same IP subnet as the CheetahAccess Internet Gateway. The default subnet address of the CheetahAccess Internet Gateway is 192.168.2.X (where X means 2–254) and the subnet mask is 255.255.255.0. You can set the IP address for client PCs either by automatically obtaining an IP address from the CheetahAccess Internet Gateway's DHCP service or by manual configuration. See "Setting TCP/IP to Work with the Barricade" on page 5-3.

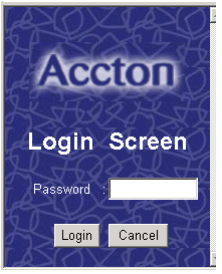
Printer Client Installation

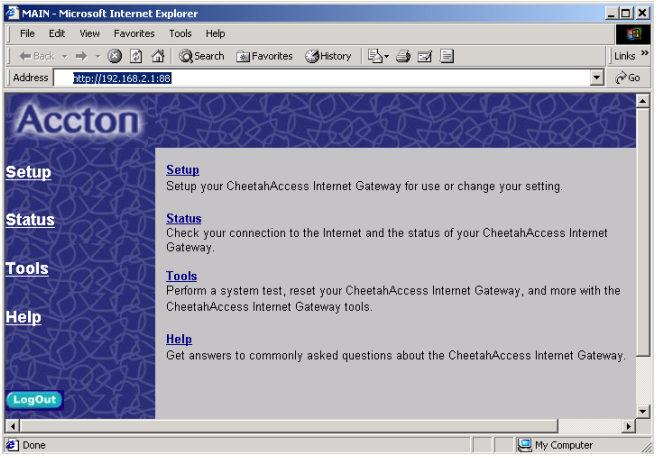
If you need to provide print services for devices attached to the CheetahAccess Internet Gateway, then install the Port Monitor program from the CheetahAccess Internet Gateway CD (for Windows 95/98/ME/NT/2000), and configure the CheetahAccess Internet Gateway's print server on each network station. The CheetahAccess Internet Gateway printer server supports Windows 95/98/ME/NT/2000, and Unix platforms. Refer to Chapter 6: "Configuring Printer Services."

Chapter 4: Configuring the CheetahAccess Internet Gateway

After you have configured TCP/IP on a client computer, you can use a Web browser to configure the CheetahAccess Internet Gateway. The CheetahAccess Internet Gateway can be configured by any Java-supported browser including Internet Explorer 4.0 or above, or Netscape Navigator 4.0 or above. Using the Web management interface, you can configure the CheetahAccess Internet Gateway and view statistics to monitor network activity.

To access the CheetahAccess Internet Gateway's management interface, enter the IP address of the CheetahAccess Internet Gateway in your Web browser http://192.168.2.1 (The CheetahAccess Internet Gateway automatically switches to Port 88 for management access.) Then login the CheetahAccess Internet Gateway system with no password (by default, there is no password). The home page displays the Main Menu on the left-hand side of the screen and descriptive information on the right-hand side. The Main Menu links are used to navigate to other menus that display configuration parameters and statistics.




MAIN - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Search Favorites History
Address http://192.168.2.1:88
Accton
Setup
Status
Tools
Help
LogOut
Setup
Setup your CheetahAccess Internet Gateway for use or change your setting.
Status
Check your connection to the Internet and the status of your CheetahAccess Internet Gateway.
Tools
Perform a system test, reset your CheetahAccess Internet Gateway, and more with the CheetahAccess Internet Gateway tools.
Help
Get answers to commonly asked questions about the CheetahAccess Internet Gateway.
Done
My Computer

Navigating the Web Browser Interface

The CheetahAccess Internet Gateway's management interface includes four key menus – Status, Help, Tools, and Setup. The Status and Help menus provide general information on the current settings and how to configure the CheetahAccess Internet Gateway. The Setup menu is used to configure the LAN and WAN interface, as well as other advanced functions. While the Tools menu is used to reset the CheetahAccess Internet Gateway, restore the factory settings, or upgrade firmware.

Setting a Password

If this is your first time to access the CheetahAccess Internet Gateway, you should define a new password, record it and put it in a safe place. From the Main Menu, select “Setup,” click on “Change Password” and follow the instructions on the screen (see page 4-4). Note that passwords can consist of 3 to 12 alphanumeric characters and are case sensitive.

Making Configuration Changes

Configurable parameters have a dialog box or a drop-down list. Once a configuration change has been made on a page, be sure to click the “Enter” button at the bottom of the page to confirm the new setting.

Note: To ensure proper screen refresh after a command entry, be sure that Internet Explorer 5.0 is configured as follows: Under the menu “Tools / Internet Options / General / Temporary Internet Files / Settings,” the setting for “Check for newer versions of stored pages” should be “Every visit to the page.”

Main Menu

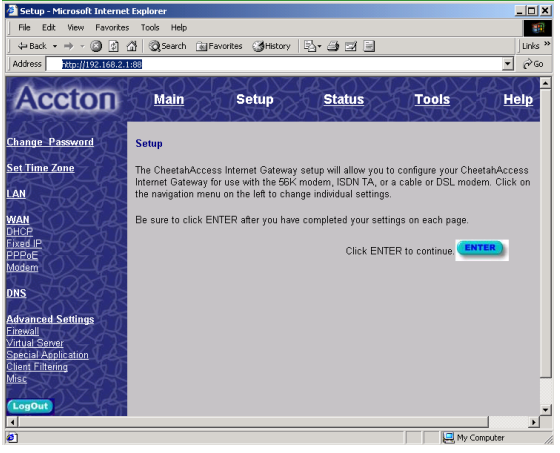
Using the Web management interface, you can define system parameters, manage and control the CheetahAccess Internet Gateway and its ports, or monitor network conditions. The following table briefly describes the selections available from this program.

Menu	Description
Setup Menu	Configures TCP/IP settings and client services.
Change Password	Sets the password for administrator access.
Set Time Zone	Sets the local time zone.
LAN	Sets the TCP/IP configuration for the CheetahAccess Internet Gateway LAN interface and all DHCP clients.
WAN	Specifies the Internet connection type: (1) DHCP host configuration, (2) fixed IP and gateway address, (3) PPPoE configuration, or (4) dial-up modem.
DNS	Specifies DNS servers to use for domain name resolution.
Advanced Settings	Configures a variety of packet filtering and specialized functions, including: • Firewall • Virtual Server • Special Application • Client Filtering • Misc
Status Menu	Displays WAN/LAN connection status, as well as firmware and hardware version numbers.
INTERNET	Displays WAN connection type and status.
GATEWAY	Displays system IP settings, as well as DHCP, NAT, Firewall and Printer status.

Menu	Description
INFORMATION	Displays the number of attached clients, the firmware versions, the physical MAC address for each media interface, as well as the hardware version and serial number.
Security Log	Displays any illegal attempts to access your network.
DHCP Client Log	Displays information on all DHCP clients attached to your network.
Tools Menu	Contains options to reset the system, restore configuration settings, or update system firmware.
Reset CheetahAccess Internet Gateway	Reboots the system and retains all of your configuration settings.
Restore Factory Settings	Restores all configuration settings to the factory defaults.
Update Firmware	Upgrades the system with the latest firmware obtained from Accton's website at www.accton.com.
Help Menu	Contains information for product support, troubleshooting, and network terminology.
Logout Button	Exits the CheetahAccess Internet Gateway system.

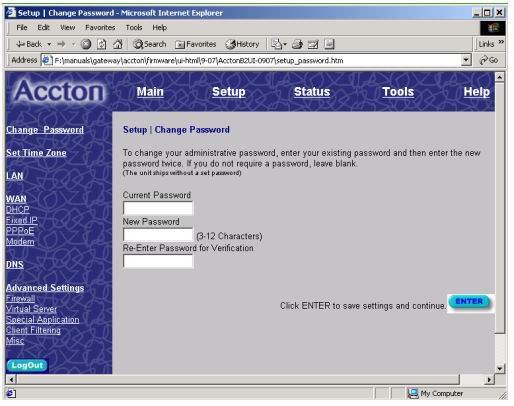
Networking and Client Services

Use the Setup menu to configure the LAN interface (including TCP/IP parameters for the CheetahAccess Internet Gateway's gateway address and DHCP address pool for dynamic client address allocation), the WAN connection options, DNS domain name mapping, and other advanced services.



You can use the Setup Wizard by clicking the "Enter" button at the bottom of the page and changing the required settings, or you can select the specific items you need to change from the Setup menu on the left side of the screen.

Change Password

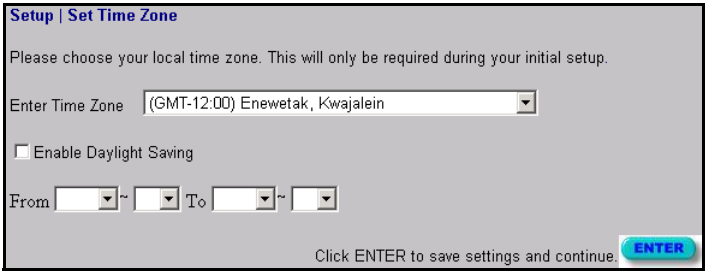


Use this menu to restrict management access based on a specific password. Anyone can access the Status and Help menus, but you must enter a password to access the configuration options provided by the Setup and Tools menus. By default, there is no password, so please assign a password to the CheetahAccess Internet Gateway as soon as possible, and store it in a safe place.

Passwords can contain from 3–12 alphanumeric characters, and are not case-sensitive.

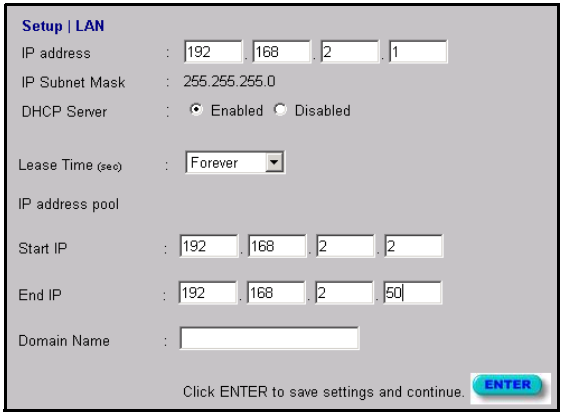
Note: If your password is lost, or you cannot gain access to the management interface, press the Reset button on the front panel (holding it down for at least five seconds) to restore the factory defaults.

Set Time Zone


Setup | Set Time Zone
Please choose your local time zone. This will only be required during your initial setup.
Enter Time Zone
(GMT-12:00) Enewetak, Kwajalein
Enable Daylight Saving
From
To
Click ENTER to save settings and continue.
ENTER

Set the time zone for the CheetahAccess Internet Gateway. This information is used for log entries and client filtering.

LAN Gateway and DHCP Settings

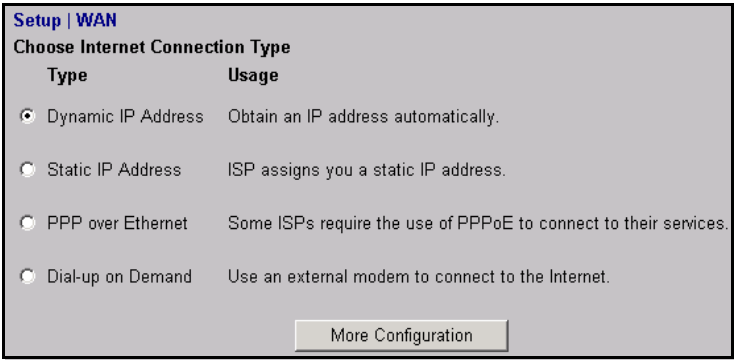

Setup | LAN
IP address : 192 . 168 . 2 . 1
IP Subnet Mask : 255.255.255.0
DHCP Server : Enabled Disabled
Lease Time (sec) : Forever
IP address pool
Start IP : 192 . 168 . 2 . 2
End IP : 192 . 168 . 2 . 50
Domain Name :
Click ENTER to save settings and continue.
ENTER

Configure the gateway address of the CheetahAccess Internet Gateway. To dynamically assign the IP address for client PCs, enable the DHCP Server, set the lease time, and then specify the address range. Also remember to configure all of your client PCs for dynamic address allocation.

Valid IP addresses consist of four numbers separated by periods. The first three fields are the network portion, and can be from 0–255, while the last field is the host portion and can be from 1–254. However, remember not to include the gateway address of the CheetahAccess Internet Gateway in the client address pool.

WAN Configuration

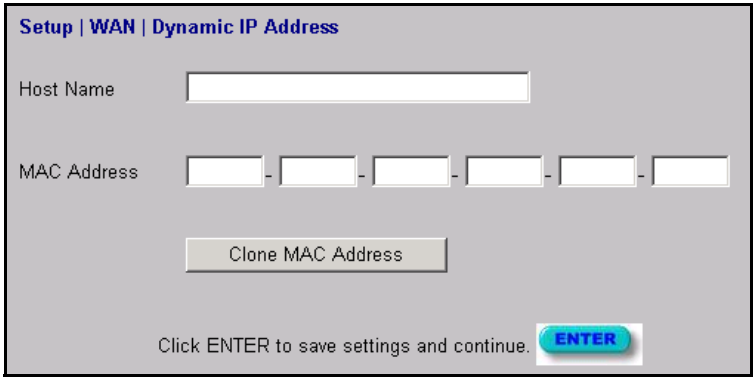
Specify the WAN connection type required by your Internet Service Provider, then click “More Configuration” to provide detailed configuration parameters for the selected connection type.


Setup | WAN
Choose Internet Connection Type
Type
Usage
Dynamic IP Address
Obtain an IP address automatically.
Static IP Address
ISP assigns you a static IP address.
PPP over Ethernet
Some ISPs require the use of PPPoE to connect to their services.
Dial-up on Demand
Use an external modem to connect to the Internet.
More Configuration

Specify one of the first three options to configure a WAN connection through the RJ-45 port (i.e., a connection to an xDSL modem or Cable modem). Specify the “Dial-up on Demand” option to configure a WAN connection through the serial port (i.e., a connection to an ISDN TA or PSTN modem).

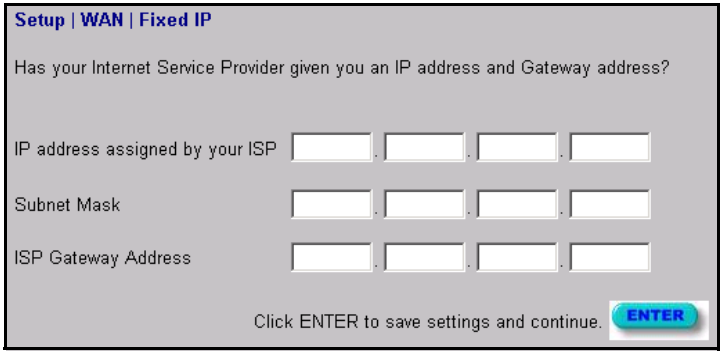
Note: If WAN connections are configured for both the RJ-45 and serial port, the serial port will be used as a backup Internet connection if the primary RJ-45 WAN connection fails.

Dynamic IP Address – DHCP



The Host Name is optional, but may be required by some ISPs. The default MAC address is set to the WAN's physical interface on the CheetahAccess Internet Gateway. Use this address when registering for Internet service, and do not change it unless required to by your ISP. You can use the "Clone MAC Address" button to copy the MAC address of the Ethernet Card installed by your ISP (in your PC) and replace the WAN MAC address with this MAC address.

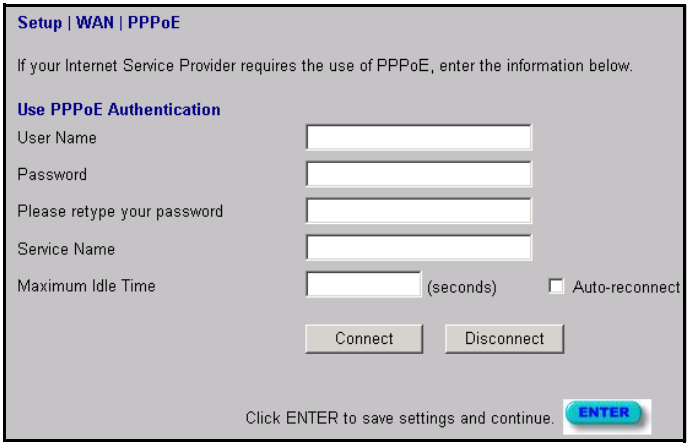
Static IP Address – Fixed IP


Setup | WAN | Fixed IP
Has your Internet Service Provider given you an IP address and Gateway address?
IP address assigned by your ISP
Subnet Mask
ISP Gateway Address
Click ENTER to save settings and continue.
ENTER

If your Internet Service Provider has assigned a fixed address, enter the assigned address and subnet mask for the CheetahAccess Internet Gateway, then enter the gateway address of your ISP.

Note: You may need a fixed address if you want to provide Internet services, such as a Web server or FTP server.

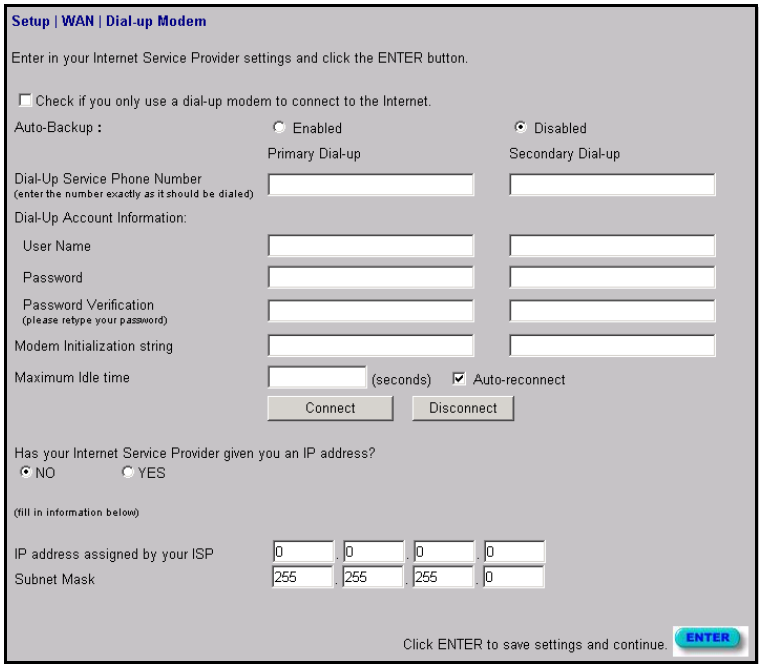
PPP over Ethernet – PPPoE



Enter the PPPoE user name and password assigned by your ISP. The Service Name is normally optional, but may be required by some providers.

Enter the maximum idle time for the Barricade Plus (in seconds). Also, you can check the “Auto-reconnect” for automatically connecting to your ISP server.

Dial-up on Demand – Modem



If you are accessing the Internet via an ISDN TA or PSTN modem attached to the serial port on the CheetahAccess Internet Gateway, then you must specify your account information on this screen as described below.

Check if you only use a dial-up modem to connect to the Internet. – If the serial port is used for primary Internet access, then check this item. If not checked, then this connection will only be used for backup access if the primary WAN link fails.

Dial-Up Service Phone Number – Enter the phone number your service provider has given to you for Internet access.

Dial-Up Account Information – Enter your ISP account user name and password.

Modem Initialization string – Enter the initialization string provided by your modem manufacturer. The following is a sample initialization string: "ATQ1S0=1&D0&K0&W" as defined below:

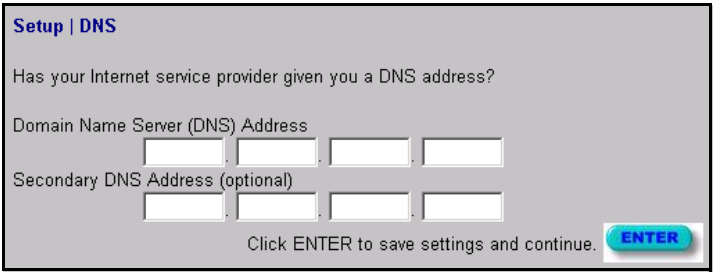
Q1 : Inhibit result codes to DTE
S0=1 : Auto answer on first ring
D0 : Don't care DTR
K0 : Disables DTE/DCE flow control
W : Write command to modem memory

Maximum Idle time – Enter the maximum idle time for the CheetahAccess Internet Gateway (in seconds).

Has your Internet Service Provider given you an IP address? – If you are assigned a dynamic IP address every time you dial up, select “No” for this item. However, if your ISP has assigned a fixed IP address for you to use, select “Yes” for this item and enter the IP address and subnet mask.

Note: If your ISP has given you a secondary phone number, or if you have a secondary Internet service account, then fill in the relevant fields under “Secondary Dial-up.”

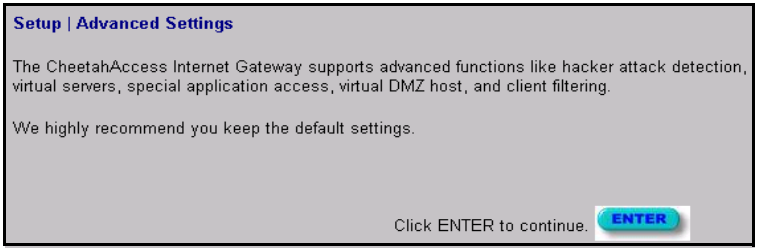
DNS Configuration


Setup | DNS
Has your Internet service provider given you a DNS address?
Domain Name Server (DNS) Address
Secondary DNS Address (optional)
Click ENTER to save settings and continue.
ENTER

Domain Name Servers are used to map an IP address to the equivalent domain name (e.g., www.accton.com). Your ISP should provide the IP address for one or more domain name servers. Enter those addresses on this screen.

Configuring Client Services

The CheetahAccess Internet Gateway includes a broad range of client services, including firewall protection, network address translation, virtual server, connection support for special applications, and restricted Internet access for specified clients. You can configure these functions using the Setup Wizard by clicking “Enter” at the bottom of the Advanced Settings screen, or by selecting specific items from the menu on the left of the screen.


Setup | Advanced Settings
The CheetahAccess Internet Gateway supports advanced functions like hacker attack detection, virtual servers, special application access, virtual DMZ host, and client filtering.
We highly recommend you keep the default settings.
Click ENTER to continue.
ENTER

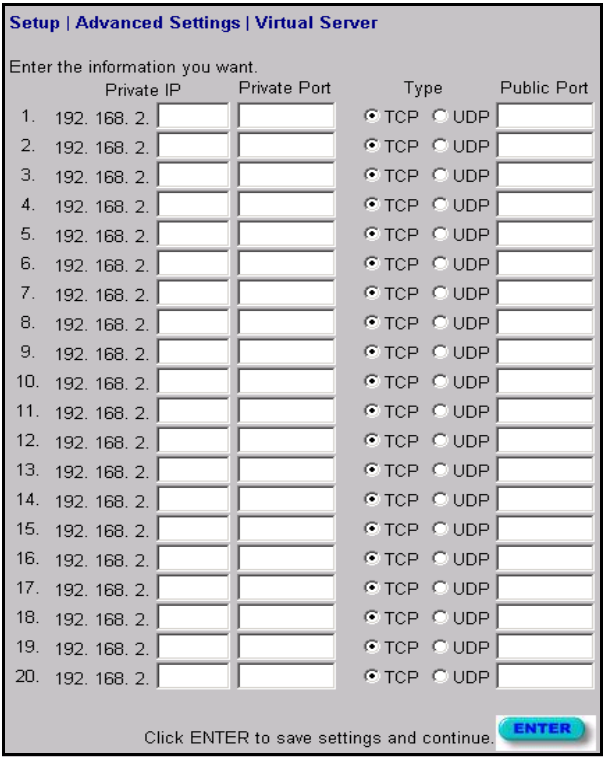
Firewall Protection

The CheetahAccess Internet Gateway’s firewall can block common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Snork Attack, TCP null scan, and TCP SYN flooding. The firewall does not significantly affect system performance, so we advise leaving it enabled to protect your network users.

Setup | Advanced Settings | Firewall
Do you want to enable the hacker attack monitoring and logging function?
No
Yes
Click ENTER to save settings and continue.
ENTER

Virtual Server

If you configure the CheetahAccess Internet Gateway as a virtual server, remote users accessing services such as Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. In other words, depending on the requested service (TCP/UDP port number), the CheetahAccess Internet Gateway redirects the external service request to the appropriate server (located at another internal IP address).


Setup | Advanced Settings | Virtual Server
Enter the information you want.
Private IP
Private Port
Type
Public Port
1. 192. 168. 2. TCP UDP
2. 192. 168. 2. TCP UDP
3. 192. 168. 2. TCP UDP
4. 192. 168. 2. TCP UDP
5. 192. 168. 2. TCP UDP
6. 192. 168. 2. TCP UDP
7. 192. 168. 2. TCP UDP
8. 192. 168. 2. TCP UDP
9. 192. 168. 2. TCP UDP
10. 192. 168. 2. TCP UDP
11. 192. 168. 2. TCP UDP
12. 192. 168. 2. TCP UDP
13. 192. 168. 2. TCP UDP
14. 192. 168. 2. TCP UDP
15. 192. 168. 2. TCP UDP
16. 192. 168. 2. TCP UDP
17. 192. 168. 2. TCP UDP
18. 192. 168. 2. TCP UDP
19. 192. 168. 2. TCP UDP
20. 192. 168. 2. TCP UDP
Click ENTER to save settings and continue.
ENTER

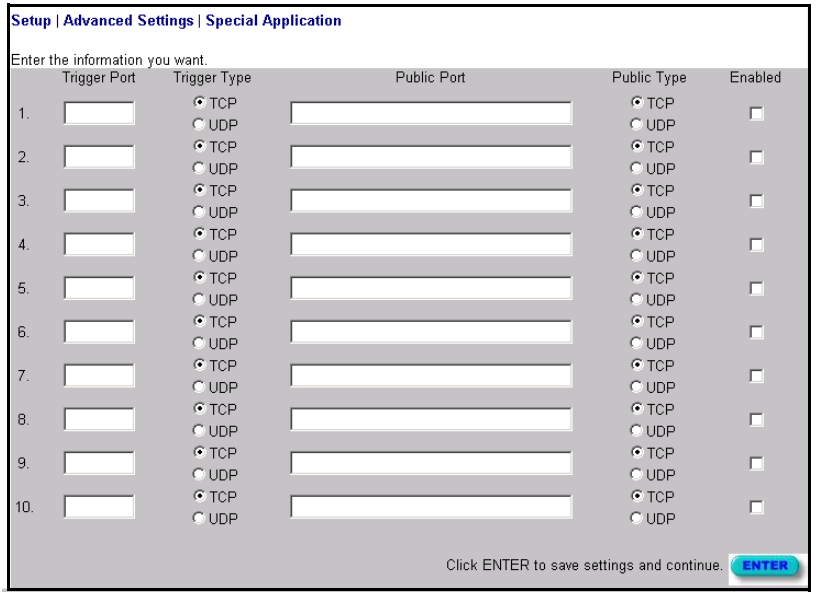
The WAN interface must have a fixed IP address to utilize this function. For example, if you set Type/Public Port to TCP/80 (HTTP or Web) and the Private IP/ Port to 192.168.2.2/80, then all HTTP request from outside users will be transferred to 192.168.2.2. Therefore, by just entering the IP Address provided by the ISP, Internet users can access the service they need at the local address to which you redirect them.

Some of the more common TCP service ports include:

HTTP: 80, FTP: 21, Telnet: 23 and POP3: 110.

Enabling Special Applications

Some applications, such as Internet gaming, videoconferencing, Internet telephony and others, require multiple connections. These applications may not work when Network Address Translation (NAT) is enabled. If you need to run applications that require multiple connections, use the following screen to specify the additional public ports to be opened for each application.

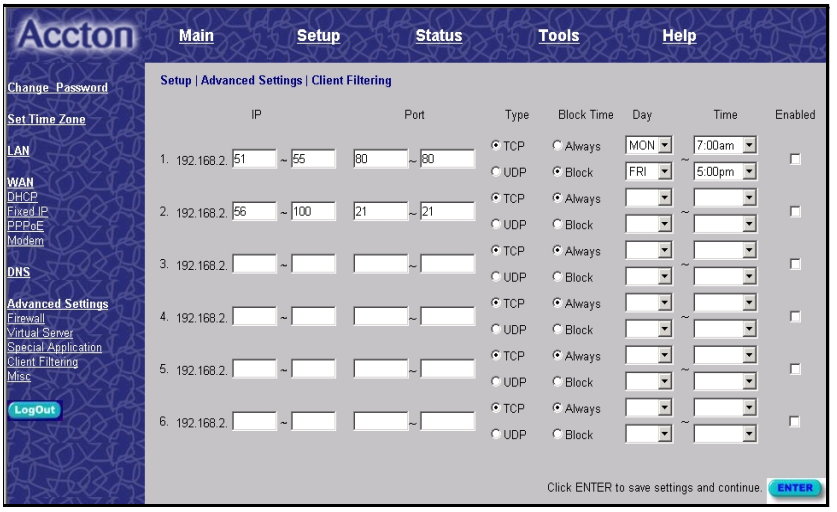


Specify the port normally associated with an application in the “Trigger Port” field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

Note: If an application still cannot function correctly after enabling multiple ports via the Special Application screen, you may have to open the client PC for full Internet access using the DMZ Host option.

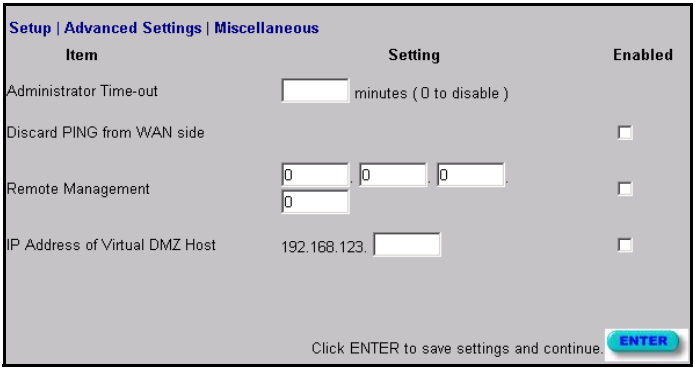
Client Filtering

You can filter Internet access for local clients based on IP address, application type (i.e., HTTP port), and time of day.



For example, this screen shows that clients in the address range 192.168.2.56-100 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.2.51-55 are blocked from browsing the Internet from Monday through Friday.

Miscellaneous



Administrator Time-out – Enter time-out setting in minutes for administration protection.

Discard PING from WAN side – You can enhance your network security by preventing any host on the WAN pinging the CheetahAccess Internet Gateway.

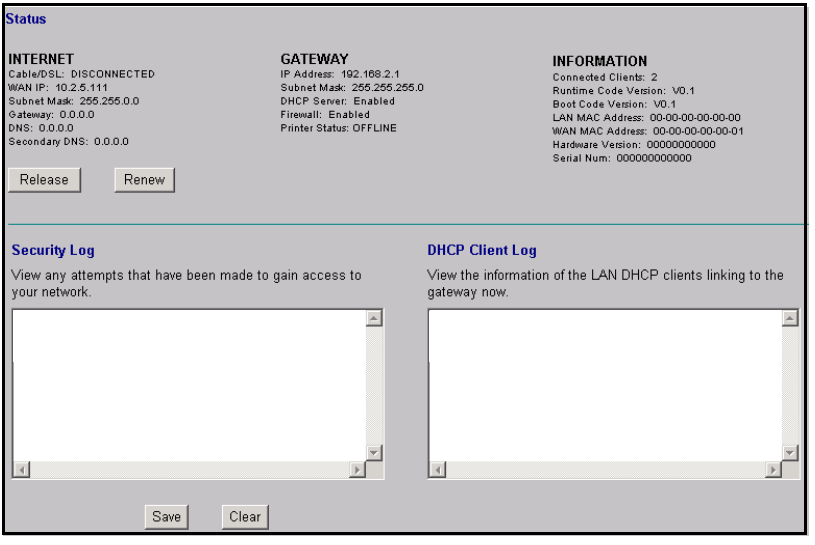
Remote Management – By default, management access is only available to users on your local network. However, you can also manage the CheetahAccess Internet Gateway from a remote host by adding the IP address of an administrator to this screen.

Note: If you specify an IP address of 0.0.0.0, any host can manage the CheetahAccess Internet Gateway.

Virtual DMZ Host – If you have a client PC that cannot run an Internet application properly from behind the firewall or after configuring the Special Applications function, then you can open the client up to unrestricted two-way Internet access. Enter the IP address of a DMZ host in this screen. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.

Viewing Network and Device Status

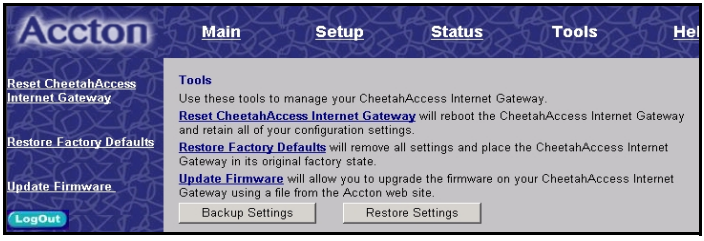
You can use the following screen to display WAN/LAN connection status, firmware and hardware version numbers, any illegal attempts to access your network, as well as information on all DHCP clients connected to your network.



The following items are included in this screen:

Field	Description
INTERNET	Displays WAN connection type and status.
Release	Click on this button to confirm Internet settings.
Renew	Click on this button to refresh Internet settings.
GATEWAY	Displays system IP settings, as well as DHCP, NAT, Firewall and Printer status.
INFORMATION	Displays the number of attached clients, the firmware versions, the physical MAC address for each media interface, as well as the hardware version and serial number.
Security Log	Displays any illegal attempts to access your network.
Save	Click on this button to save a security log file.
Clear	Click on this button to delete the access log.
DHCP Client Log	Displays information on all DHCP clients on your network.

Using System Tools


Accton
Main
Setup
Status
Tools
Reset CheetahAccess Internet Gateway
Restore Factory Defaults
Update Firmware
LogOut
Tools
Use these tools to manage your CheetahAccess Internet Gateway.
Reset CheetahAccess Internet Gateway will reboot the CheetahAccess Internet Gateway and retain all of your configuration settings.
Restore Factory Defaults will remove all settings and place the CheetahAccess Internet Gateway in its original factory state.
Update Firmware will allow you to upgrade the firmware on your CheetahAccess Internet Gateway using a file from the Accton web site.
Backup Settings
Restore Settings

You can use the “Tools” menu to reboot the CheetahAccess Internet Gateway, restore factory settings, or update firmware.

The “Backup Settings” button allows you to save your CheetahAccess Internet Gateway’s configuration to a file named config.bin on your PC. You can then click on the “Restore Settings” button to restore the saved backup configuration file.

Note: If you use the Reset button on the front panel, the CheetahAccess Internet Gateway performs a power reset and restores the factory settings.

Chapter 5: Configuring Client TCP/IP

If you have not previously installed the TCP/IP protocol on your client PCs, refer to the following section. If you need information on how to configure a TCP/IP address on a PC, refer to “Setting TCP/IP to Work with the CheetahAccess Internet Gateway” on page 5-2.

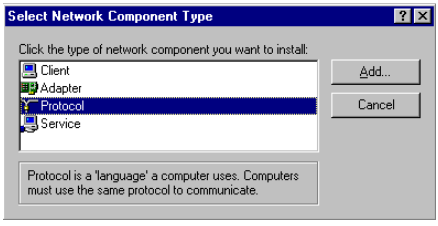
Installing TCP/IP Protocol in Your PC

1. Click the “Start” button and choose “Settings,” then click “Control Panel.”

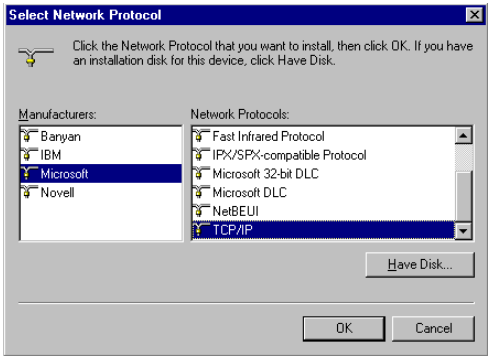
2. Double click the “Network” icon and select the “Configuration” tab in the Network window.

3. Click the “Add” button to add the network component to your PC.

4. Double click “Protocol” to add the TCP/IP protocol.



5. Select the “Microsoft” item in the manufacturers list. And choose “TCP/IP” in the Network Protocols. Click the “OK” button to return to the Network window.

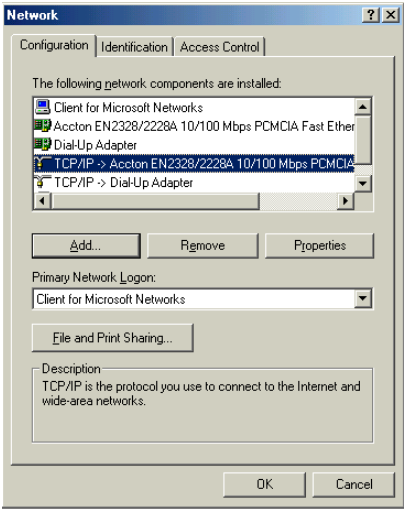


6. The TCP/IP protocol will be listed in the Network window. Click “OK” to complete the install procedure and restart your PC to enable the TCP/IP protocol.

Setting TCP/IP to Work with the CheetahAccess Internet Gateway

1. Click the “Start” button and choose “Settings,” then click “Control Panel.”

2. Double click the “Network” icon. Select the TCP/IP line that has been assigned to your network card in the “Configuration” tab of the Network window.



3. Click the “Properties” button to set the TCP/IP protocol for the CheetahAccess Internet Gateway.

4. You can dynamically assign TCP/IP address settings to a client, or you can manually configure a client with address settings to meet your specific network requirements. (Note that the default IP address of the CheetahAccess Internet Gateway is 192.168.2.1.)

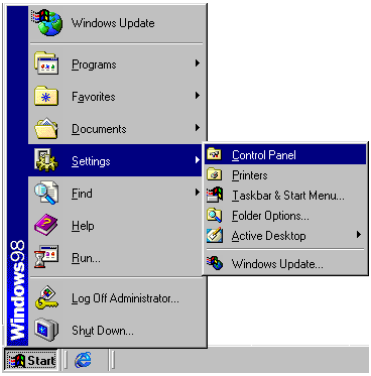
Configuring Your Computer with Windows 95/98/ME

You may find that the instructions here do not exactly match your version of Windows. This is because these steps and screenshots were created from Windows 98. Windows 95 and Windows Millennium Edition are very similar, but not identical, to Windows 98.

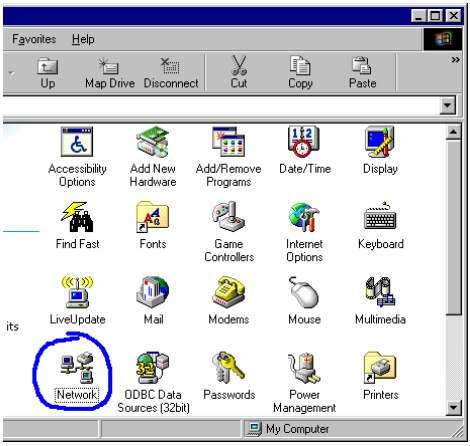
Step 1. Configure TCP/IP Settings

After you have completed the hardware setup by connecting your devices, you need to configure your computer to connect to your CheetahAccess Internet Gateway. You need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

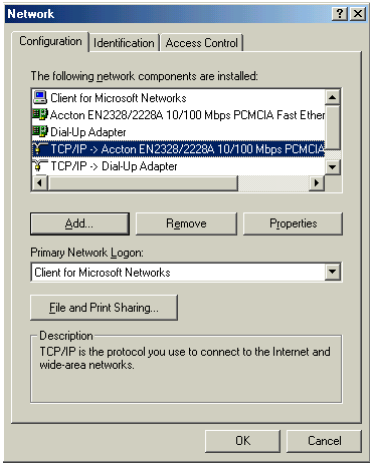
1. From the Windows desktop, click the “Start” button. Choose “Settings,” then click “Control Panel.”



2. From “Control Panel,” double-click the “Network” icon.

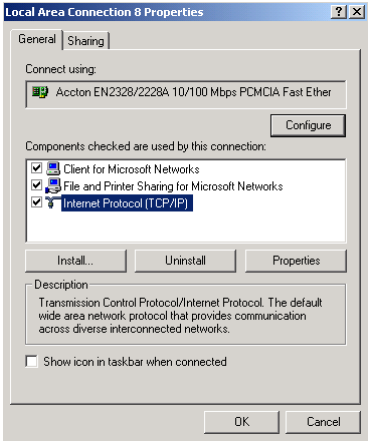


3. In the “Network” window, under the “Configuration” tab, double-click the “TCP/IP” entry that is listed with your network card.



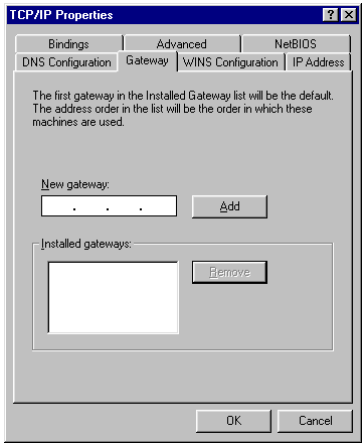
4. Select the “IP Address” tab.

If “Obtain an IP address automatically” is already selected, your computer is already configured for DHCP. Click “Cancel” to close each window, and skip to Step 2 “Disable HTTP Proxy.”



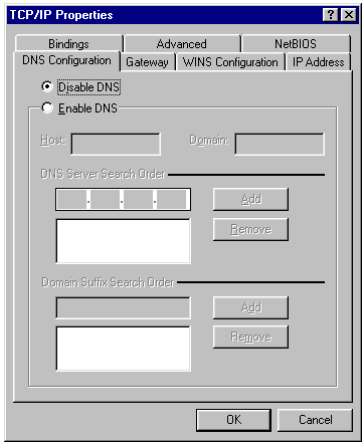
5. Locate your IP address and Subnet Mask. Record them in the spaces provided below.

6. Click the “Gateway” tab and record the numbers listed under “Installed gateways.”

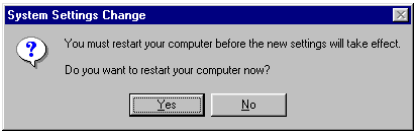


7. Click the “DNS Configuration” tab. Locate the DNS servers listed under “DNS Server Search Order.” Record the listed addresses.

8. After writing down your settings, check to make sure you have recorded them correctly. Click the “IP Address” tab and then click “Obtain an IP address automatically.” Click OK.



9. Windows may need your Windows 95/98/ME CD to copy some files. After it finishes copying, it will then prompt you to restart your system. Click “Yes” and your computer will shut down and restart.


System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

TCP/IP Configuration Setting

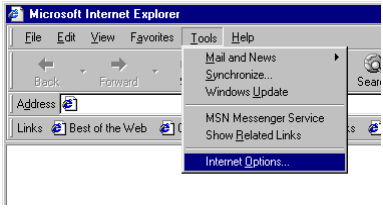
IP Address	_____._____._____._____
Subnet Mask	_____._____._____._____
Primary DNS Server	_____._____._____._____
Secondary DNS Server	_____._____._____._____
Default Gateway	_____._____._____._____

Step 2. Disable HTTP Proxy

You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your CheetahAccess Internet Gateway. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

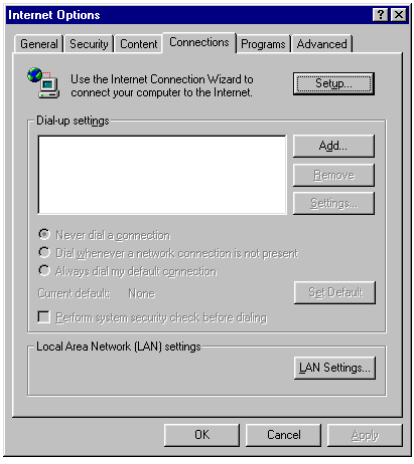
Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Tools,” then “Internet Options.”

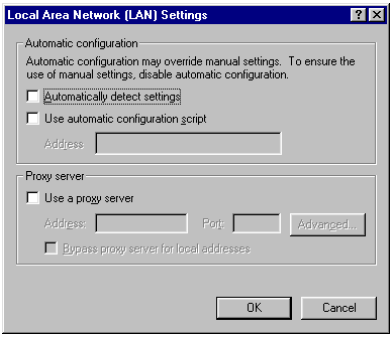


2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings...” button.

3. Clear all the checkboxes.

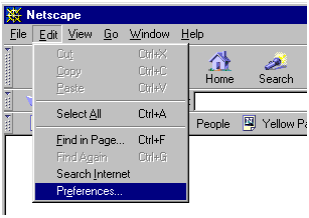


4. Click “OK,” and then click “OK” again to close the “Internet Options” window.

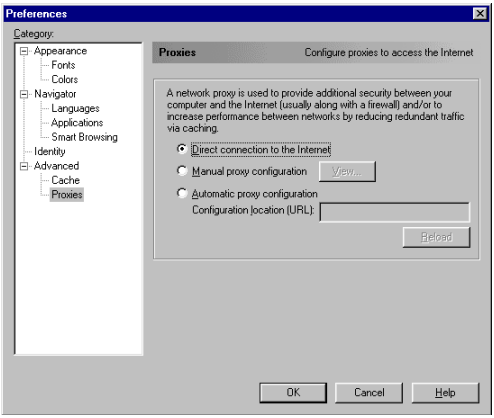

Local Area Network (LAN) Settings
Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server
Address: Port: Advanced...
Bypass proxy server for local addresses
OK
Cancel

Netscape

1. Open Netscape and click the stop button. Click “Edit,” then click “Preferences...”



2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”



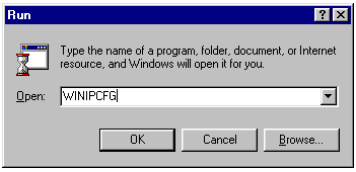
3. Repeat these steps for each Windows 95/98/ Me computer connected to your CheetahAccess Internet Gateway.

Step 3. Obtain IP Settings from Your CheetahAccess Internet Gateway

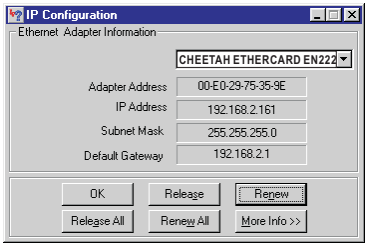
Now that you have configured your computer to connect to your CheetahAccess Internet Gateway, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your CheetahAccess Internet Gateway, you will also verify that you have configured your computer correctly.

1. Click “Start,” then “Run...”

2. Type “WINIPCFG” and click “OK.” It may take a minute or two for the “IP Configuration” window to appear.



3. From the drop-down menu, select your network card. Click “Release” and then “Renew.” Verify that your IP address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168. 2.1. These values confirm that your CheetahAccess Internet Gateway is functioning. Click “OK” to close the “IP Configuration” window.



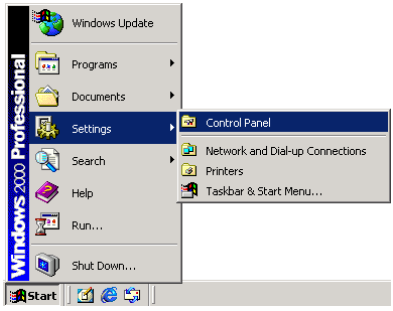
Configuring Your Computer with Windows 2000

Step 1. Configure TCP/IP Settings

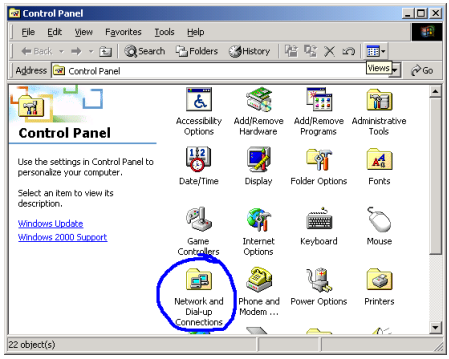
After you have completed the hardware setup, you need to configure your computer to connect to your CheetahAccess Internet Gateway. You also need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically, using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

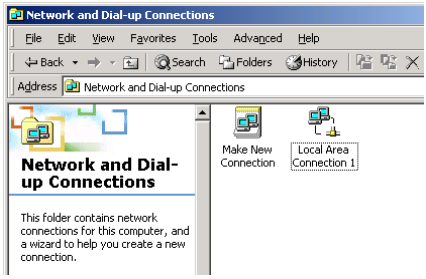
1. From the Windows desktop, click the “Start” button. Choose “Settings,” then click “Control Panel.”



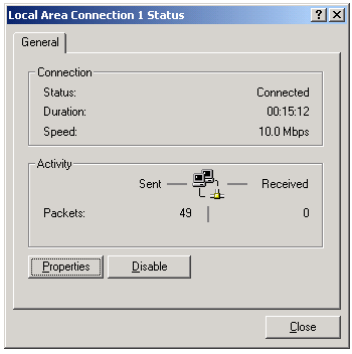
2. Double-click the “Network & Dial-Up Connections” icon.



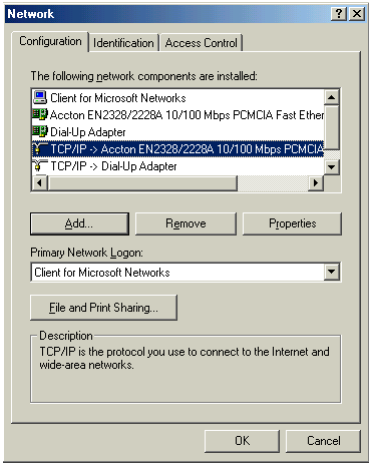
3. Double-click the icon that corresponds to the connection to your CheetahAccess Internet Gateway.


Network and Dial-up Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders History
Address Network and Dial-up Connections
Network and Dial-up Connections
This folder contains network connections for this computer, and a wizard to help you create a new connection.
Make New Connection
Local Area Connection 1

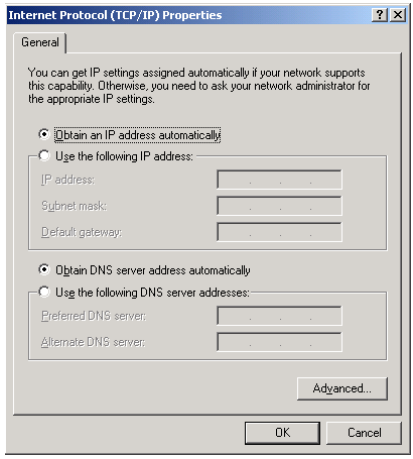
4. Click “Properties.”



5. Double-click “Internet Protocol (TCP/IP).”


Network
Configuration Identification Access Control
The following network components are installed:
Client for Microsoft Networks
Accton EN2328/2228A 10/100 Mbps PCMCIA Fast Ether
Dial-Up Adapter
TCP/IP -> Accton EN2328/2228A 10/100 Mbps PCMCIA
TCP/IP -> Dial-Up Adapter
Add... Remove Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
TCP/IP is the protocol you use to connect to the Internet and wide-area networks.
OK Cancel

6. All the information that you need to record is on the "Internet Protocol (TCP/IP) Properties" dialog box. Use the spaces below to record the information.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

If "Obtain an IP address automatically" and "Obtain DNS server address automatically" are already selected, your computer is already configured for DHCP. Click "Cancel" to close each window, and skip to Step 2 "Disable HTTP Proxy."

7. Select "Obtain an IP address automatically" and then select "Obtain DNS server address automatically." Then click "OK." Click "OK" or "Close" to close each window.

TCP/IP Configuration Setting	
IP Address	_____._____._____._____
Subnet Mask	_____._____._____._____
Primary DNS Server	_____._____._____._____
Secondary DNS Server	_____._____._____._____
Default Gateway	_____._____._____._____

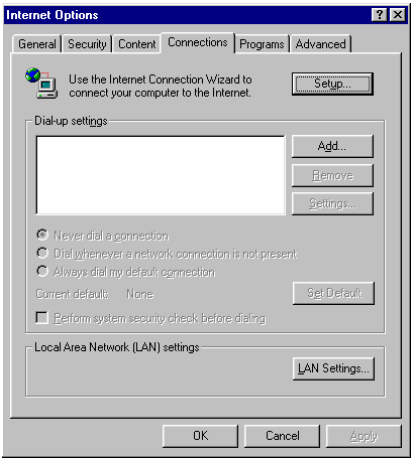
Step 2. Disable HTTP Proxy

You will need to verify that the "HTTP Proxy" feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your CheetahAccess Internet Gateway. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

Internet Explorer

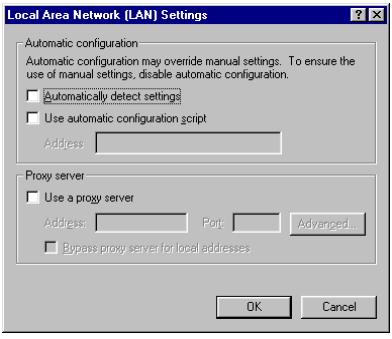
1. Open Internet Explorer and click the stop button. Click "Tools," then "Internet Options."

2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings...” button.



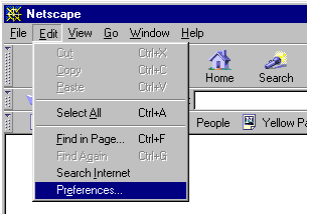
3. Clear all the checkboxes.

4. Click “OK,” and then click “OK” again to close the “Internet Options” window.

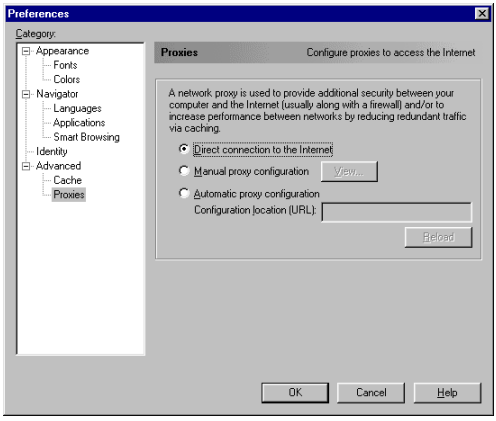


Netscape

1. Open Netscape and click the stop button. Click “Edit,” then click “Preferences...”



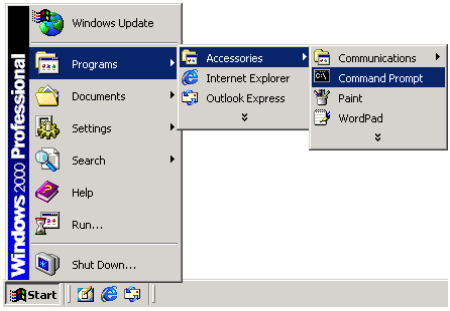
2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”



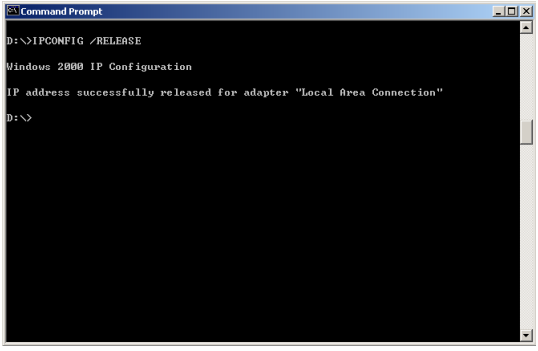
Step 3. Obtain IP Settings From Your CheetahAccess Internet Gateway

Now that you have configured your computer to connect to your CheetahAccess Internet Gateway, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your CheetahAccess Internet Gateway, you will also verify that you have configured your computer correctly.

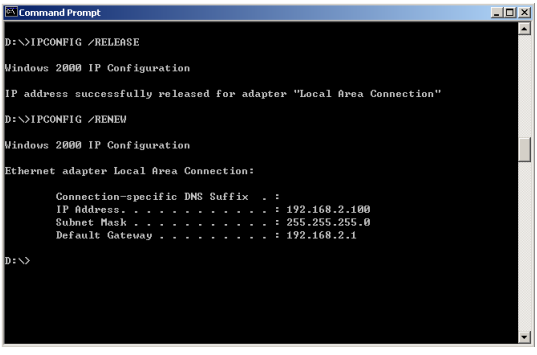
1. From the Windows desktop, click the “Start” button, then “Programs,” then “Accessories,” and then click “Command Prompt.”



2. In the “Command Prompt” window, type “IPCONFIG /RELEASE” and press the <ENTER> key.



3. Type “IPCONFIG /RENEW” and press the <ENTER> key. Verify that your IP address is now 192.168.2.xxx (2-255), your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your CheetahAccess Internet Gateway is functioning.


Command Prompt
D:\>IPCONFIG /RELEASE
Windows 2000 IP Configuration
IP address successfully released for adapter "Local Area Connection"
D:\>IPCONFIG /RENEW
Windows 2000 IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.2.100
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.2.1
D:\>

4. Type “EXIT” and press <ENTER> to close the “Command Prompt” window.

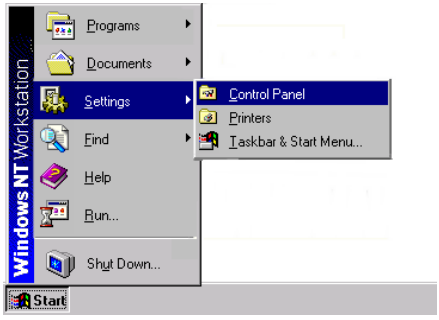
Configuring Your Computer with Windows NT 4.0

Step 1. Configure TCP/IP Settings

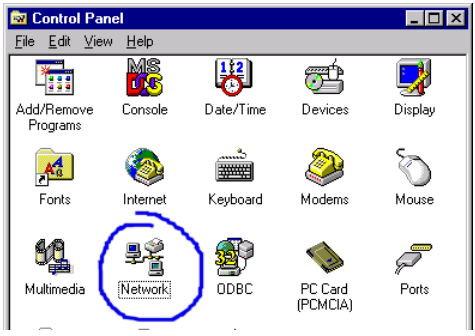
After you have completed the hardware setup, you need to configure your computer to connect to your CheetahAccess Internet Gateway. You need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

1. From the Windows desktop click “Start,” then “Settings,” and click “Control Panel.”

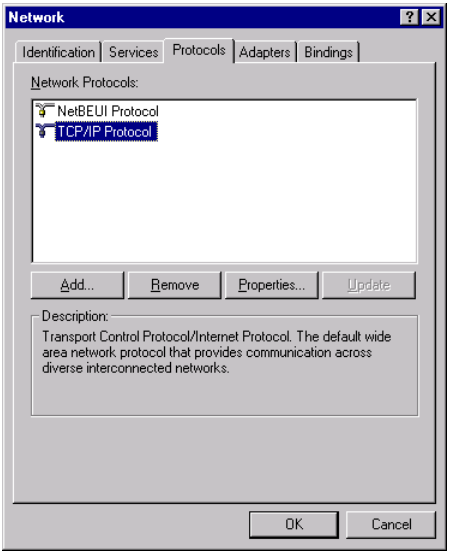


2. Double-click the “Network” icon.



3. Select the “Protocols” tab.

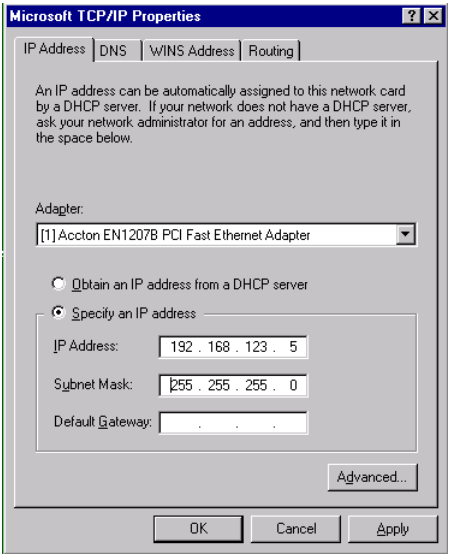
4. Double-click “TCP/IP Protocol.”



5. Select the “IP Address” tab.

6. In the “Adapter” drop-down list, be sure your Ethernet adapter is selected.

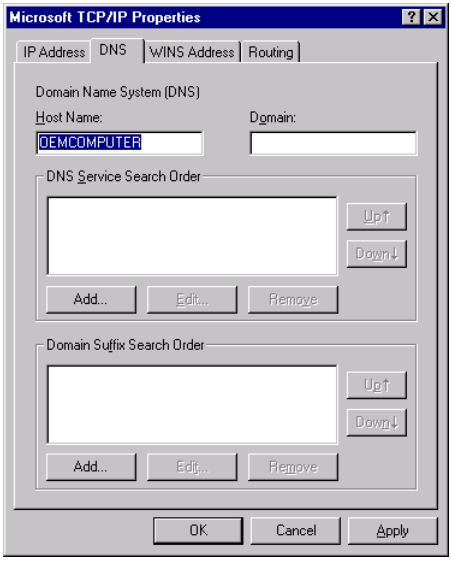
If “Obtain an IP address automatically” is already selected, your computer is already configured for DHCP. Click “Cancel” to close each window, and skip to Step 2 “Disable HTTP Proxy.”


Microsoft TCP/IP Properties
IP Address
DNS
WINS Address
Routing
An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.
Adapter:
[1] Accton EN1207B PCI Fast Ethernet Adapter
Obtain an IP address from a DHCP server
Specify an IP address
IP Address:
192 . 168 . 123 . 5
Subnet Mask:
255 . 255 . 255 . 0
Default Gateway:
Advanced...
OK
Cancel
Apply

7. In the “TCP/IP Properties” dialog box, click the IP address tab to locate your IP address, subnet Mask, and default gateway. Record these values in the space provided below.

8. Click the “DNS” tab to see the primary and secondary DNS servers. Record these values in the appropriate spaces below.

9. After writing down your IP settings, click the IP address tab. Select “Obtain IP address automatically” and click OK. Click OK again to close the “Network” window.



10. Windows may copy some files, and will then prompt you to restart your system. Click “Yes” and your computer will shut down and restart.

TCP/IP Configuration Setting

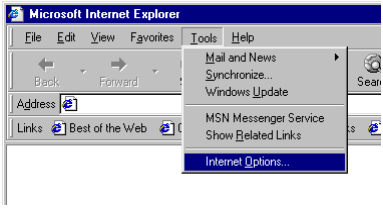
IP Address	_____._____._____._____
Subnet Mask	_____._____._____._____
Primary DNS Server	_____._____._____._____
Secondary DNS Server	_____._____._____._____
Default Gateway	_____._____._____._____

Step 2. Disable HTTP Proxy

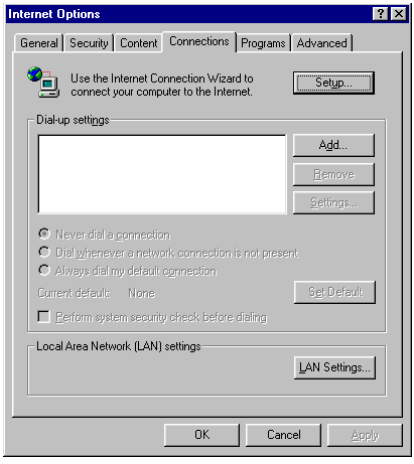
You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your CheetahAccess Internet Gateway. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Tools,” then “Internet Options.”

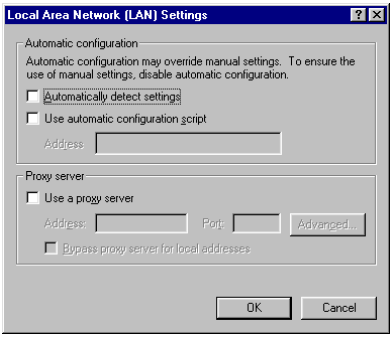


2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings...” button.



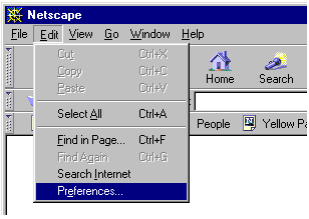
3. Clear all the checkboxes.

4. Click “OK,” and then click “OK” again to close the “Internet Options” window.

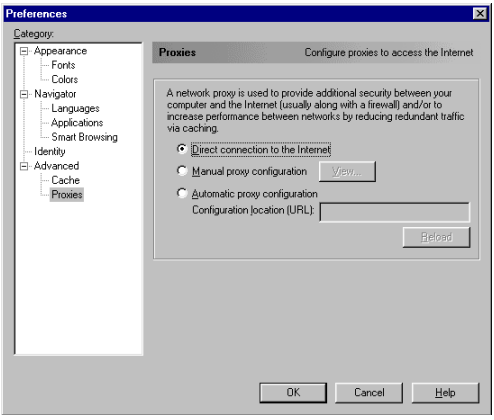


Netscape

1. Open Netscape and click the stop button. Click “Edit,” then click “Preferences...”



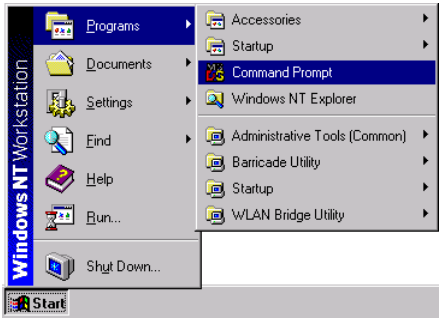
2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”



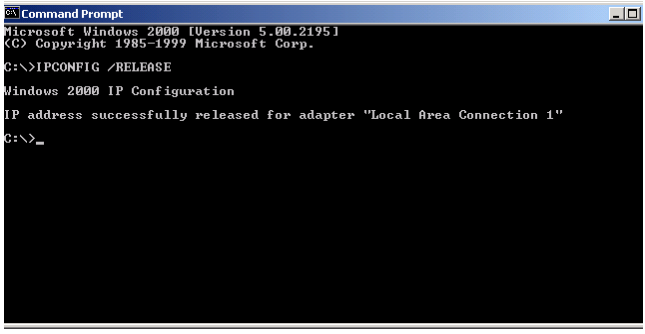
Step 3. Obtain IP Settings From Your CheetahAccess Internet Gateway

Now that you have configured your computer to connect to your CheetahAccess Internet Gateway, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your CheetahAccess Internet Gateway, you will also verify that you have configured your computer correctly.

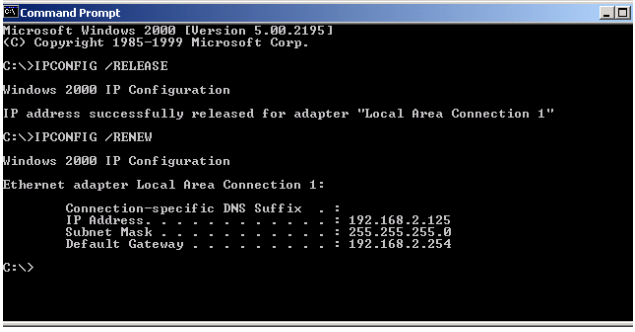
1. From the Windows desktop, click the “Start” button, then “Programs,” and then select “Command Prompt.”



2. In the “Command Prompt” window, type “IPCONFIG /RELEASE” and press the <ENTER> key.


Command Prompt
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-1999 Microsoft Corp.
C:\>IPCONFIG /RELEASE
Windows 2000 IP Configuration
IP address successfully released for adapter "Local Area Connection 1"
C:\>

3. Type “IPCONFIG /RENEW” and press the <ENTER> key. Verify that your IP address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your CheetahAccess Internet Gateway is functioning.


Command Prompt
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-1999 Microsoft Corp.
C:\>IPCONFIG /RELEASE
Windows 2000 IP Configuration
IP address successfully released for adapter "Local Area Connection 1"
C:\>IPCONFIG /RENEW
Windows 2000 IP Configuration
Ethernet adapter Local Area Connection 1:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.2.125
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.2.254
C:\>

4. Type “EXIT” and press <ENTER> to close the “Command Prompt” window.

Configuring Your Macintosh Computer

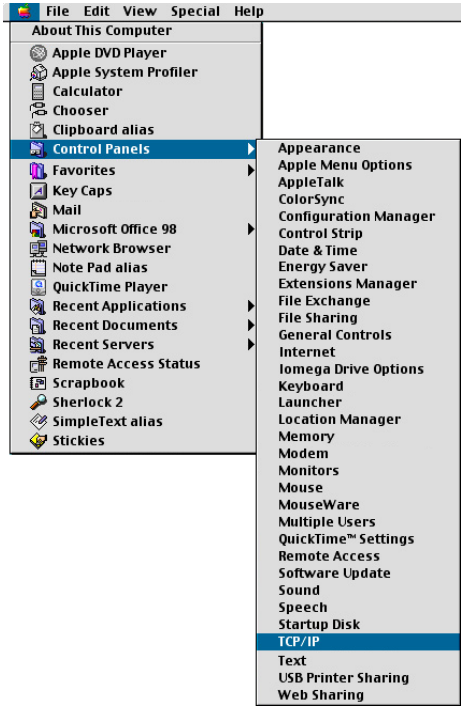
You may find that the instructions here do not exactly match your screen. This is because these steps and screenshots were created using Mac OS 8.5. Mac OS 7.x and above are all very similar, but may not be identical to Mac OS 8.5.

Step 1. Configure TCP/IP Settings

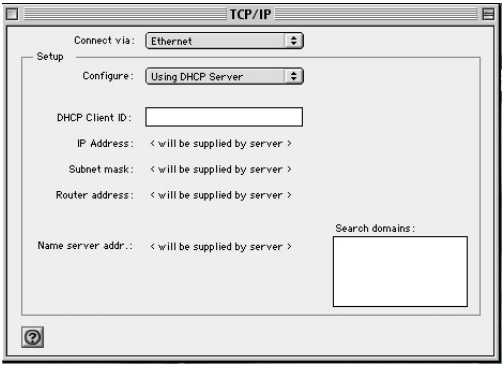
After you have completed the hardware setup, you need to configure your computer to connect to your CheetahAccess Internet Gateway. You need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

1. Pull down the Apple Menu. Click “Control Panels” and select TCP/IP.



2. In the TCP/IP dialog box, make sure that “Ethernet” is selected in the “Connect Via:” field.

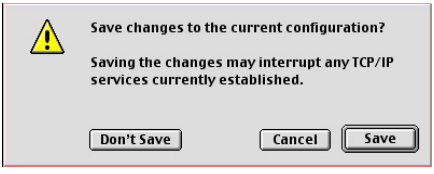


If “Using DHCP Server” is already selected in the “Configure” field, your computer is already configured for DHCP. Close the TCP/IP dialog box, and skip to Step 2 “Disable HTTP Proxy.”

3. All the information that you need to record is on the “TCP/IP” dialog box. Use the space below to record the information.

4. After writing down your IP settings, select “Using DHCP Server” in the “Configure” field and close the window.

5. Another box will appear asking whether you want to save your TCP/IP settings. Click “Save.”


Save changes to the current configuration?
Saving the changes may interrupt any TCP/IP services currently established.
Don't Save
Cancel
Save

TCP/IP Configuration Setting

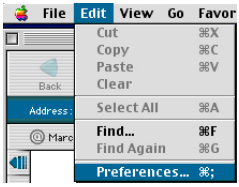
IP Address	____.____.____.____
Subnet Mask	____.____.____.____
Router	____.____.____.____
Name Server	____.____.____.____

Step 2. Disable HTTP Proxy

You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your CheetahAccess Internet Gateway. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

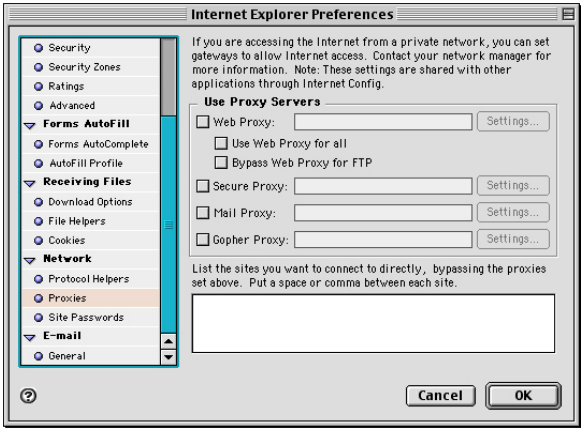
Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Edit” and select “Preferences.”



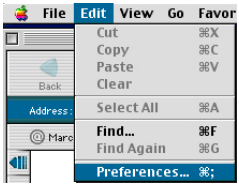
2. In the Internet Explorer Preferences window, under Network, select Proxies.

3. Uncheck all checkboxes and click “OK.”



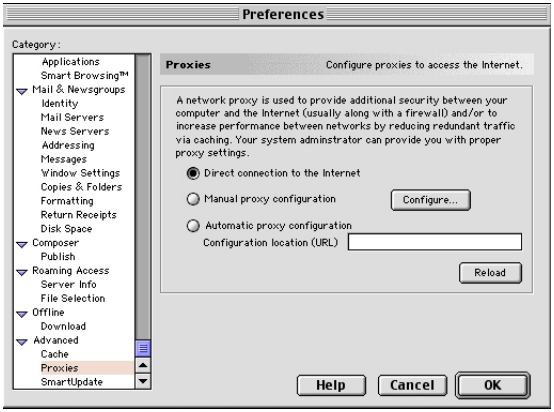
Netscape

1. Open Netscape and click the stop button. Click “Edit” and select “Preferences.”



2. In the “Preferences” dialog box, In the left-hand column labeled “Category,” select “Advanced.” Under the “Advanced” category, select “Proxies.”

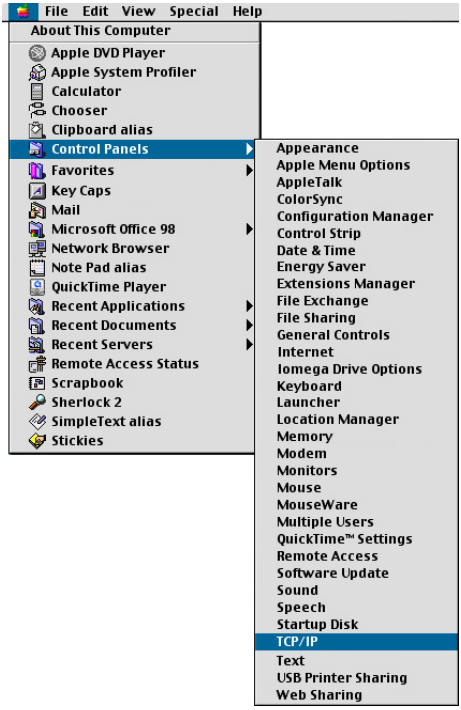
3. Select “Direct Connection to the Internet” and click “OK.”



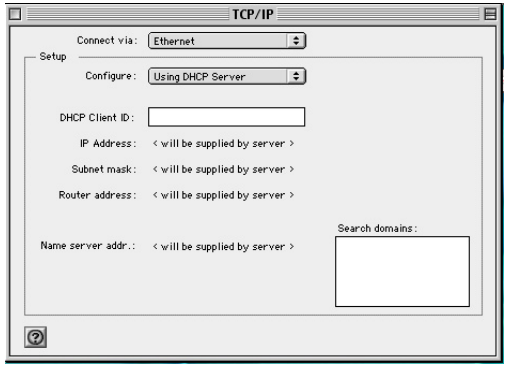
Step 3. Obtain IP Settings From Your CheetahAccess Internet Gateway

Now that you have configured your computer to connect to your CheetahAccess Internet Gateway, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your CheetahAccess Internet Gateway, you will also verify that you have configured your computer correctly.

1. Pull down the Apple Menu. Click “Control Panels” and select “TCP/IP.”



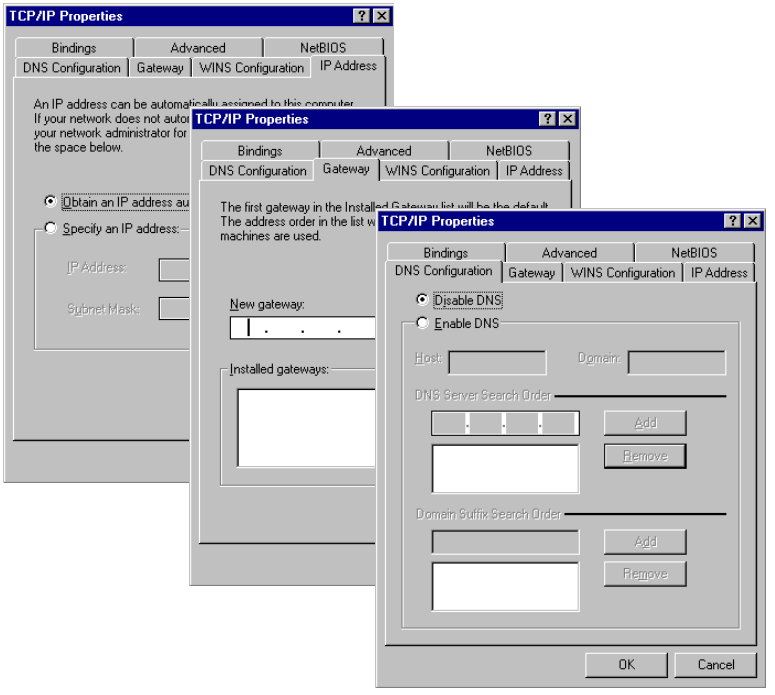
2. In the TCP/IP window, your new settings will be shown. Verify that your IP address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your CheetahAccess Internet Gateway is functioning.



3. Close the TCP/IP window.

Dynamic IP Allocation via a DHCP Server

Select “Obtain an IP address automatically” in the IP Address tab. Do not input any values under the “Gateway” tab, and choose “Disable DNS” in the “DNS Configuration” tab. These settings will be automatically configured by the DHCP server. Click “OK” and reboot your system to implement the changes.

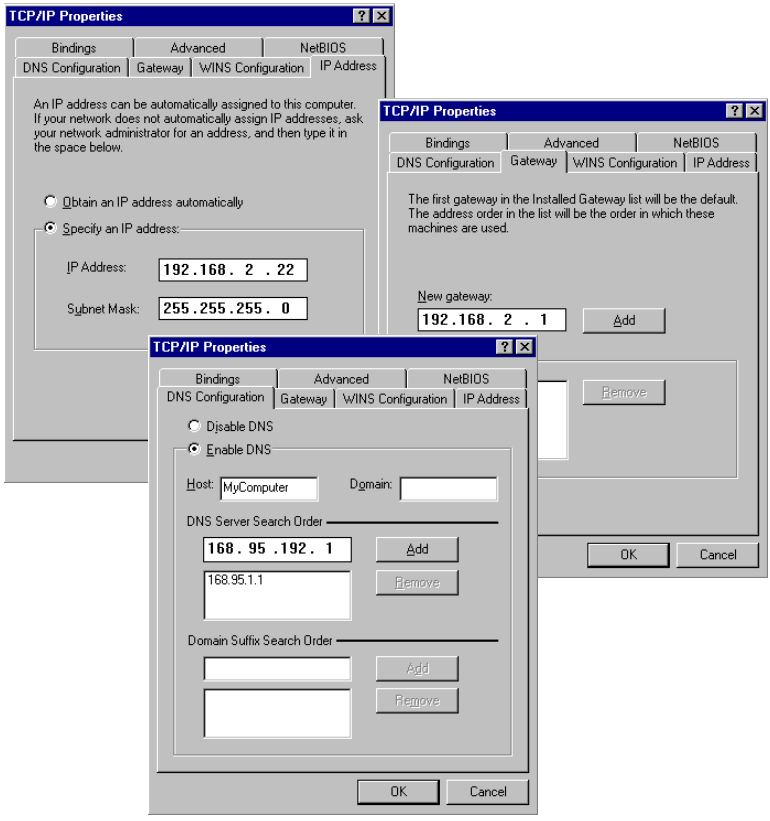


Manual IP Configuration

1. Select “Specify an IP address” in the “IP Address” tab. Select an IP address based on the default network 192.168.2.X (where X is between 2 and 254), and use 255.255.255.0 for the subnet mask.

2. In the “Gateway” tab, add the IP address of the CheetahAccess Internet Gateway (default: 192.168.2.1) in the “New gateway” field and click “Add.”

3. In the “DNS Configuration” tab, add the IP address for the CheetahAccess Internet Gateway and click “Add.” This automatically relays DNS requests to the DNS server(s) provided by your ISP. Otherwise, add specific DNS servers into the “DNS Server Search Order” field and click “Add.”



4. After finishing TCP/IP setup, click “OK,” and then reboot the computer. After that, set up other PCs on the LAN according to the procedures described above.

Verifying Your TCP/IP Connection

After installing the TCP/IP communication protocol and configuring an IP address in the same network with the CheetahAccess Internet Gateway, you can use the “Ping” command to check if your computer is successfully connected to the CheetahAccess Internet Gateway. The following example shows how the Ping procedure can be executed in an MS-DOS window. First, execute the “Ping” command:

```
ping 192.168.2.1
```

If the following messages appear:

```
Pinging 192.168.2.1 with 32 bytes of data:
Reply from 192.168.2.1: bytes=32 time=2ms TTL=64
```

a communication link between your computer and the CheetahAccess Internet Gateway has been successfully established.

Otherwise, if you get the following messages,

```
Pinging 192.168.2.1 with 32 bytes of data:
Request timed out.
```

there may be something wrong in your installation procedure. Check the following items in sequence:

1. Is the Ethernet cable correctly connected between the CheetahAccess Internet Gateway and your computer?

   The LAN LED on the CheetahAccess Internet Gateway and the Link LED of the network card on your computer must be on.

2. Is TCP/IP properly configured on your computer?

   If the IP address of the CheetahAccess Internet Gateway is 192.168.2.1, the IP address of your PC must be from 192.168.2.2 - 192.168.2.254 and the default gateway must be 192.168.2.1.

If you can successfully Ping the CheetahAccess Internet Gateway, then you are now ready to connect to the Internet!

Chapter 6: Configuring Printer Services

If you want to use the print server built into the CheetahAccess Internet Gateway, then you must first install the Port Monitor program as described in the following section for Windows 95/98/ME/NT/2000.

To configure the Internet Gateway Print Server for Windows 95/98/ME/NT/2000, or Unix, see “Configure the Print Server” on page 6-5.

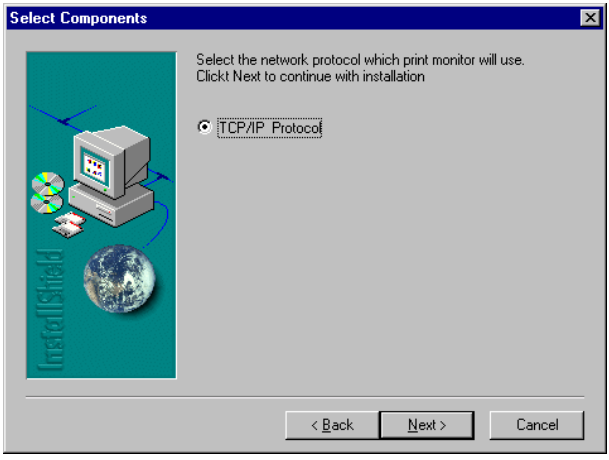
Install the Printer Port Monitor

Skip this section if you are using Unix.

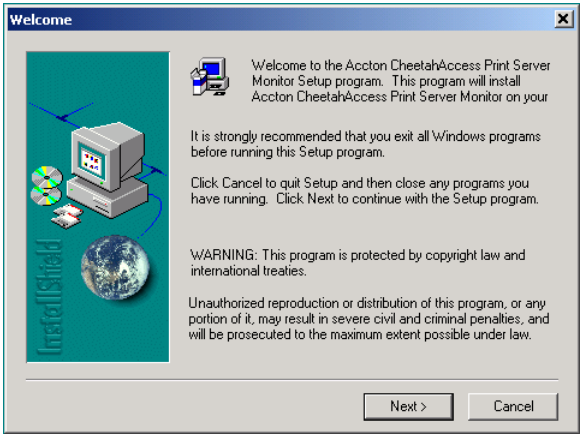
For Windows 95/98/ME/NT/2000 clients, you need to install the port monitor program as described in this section.

1. Insert the installation CD-ROM into your CD-ROM drive. Under the PrintSvr directory, run the “setup.exe” program. The Accton Port Monitor installation program advises you to close all other Windows programs currently running on your computer. Click “Next” to continue.

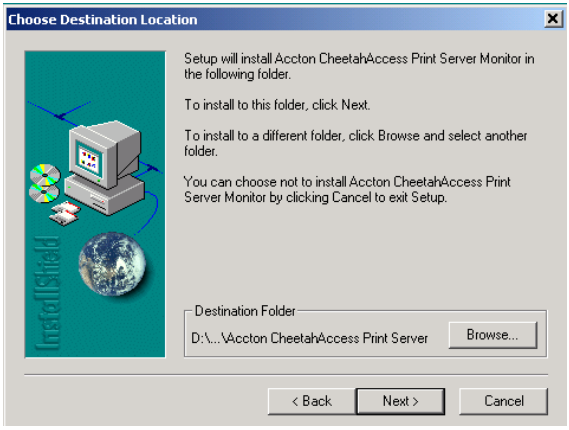
2. The next screen indicates that the print client uses TCP/IP network protocol to monitor print requests. Click “Next.”


Select Components
Select the network protocol which print monitor will use.
Clickt Next to continue with installation
TCP/IP Protocol
< Back
Next >
Cancel

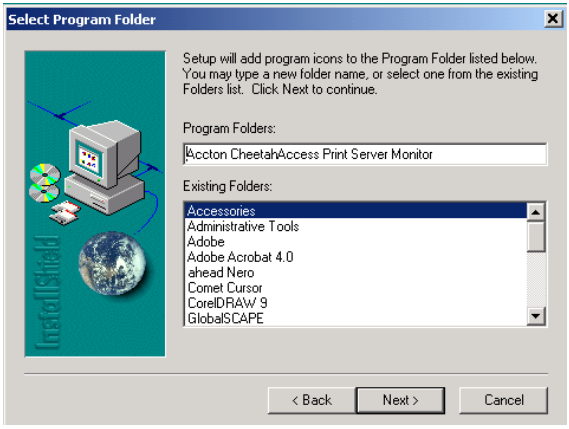
3. Install Shield will guide you through the installation process. Click “Next” to continue installation.


Welcome
Welcome to the Accton CheetahAccess Print Server Monitor Setup program. This program will install Accton CheetahAccess Print Server Monitor on your
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
InstallShield
Next >
Cancel

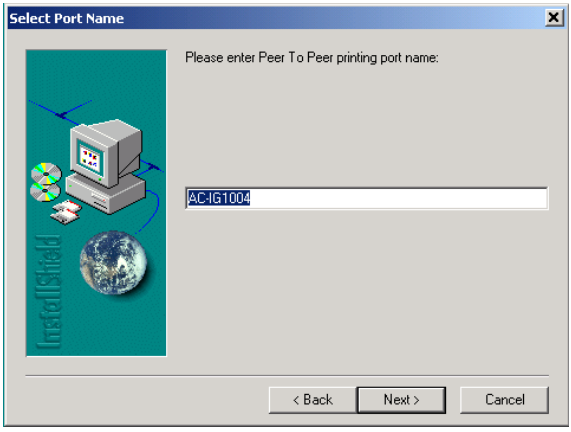
4. Select the destination folder and click on the “Next” button. The setup program will then begin to install the programs into the destination folder.


Choose Destination Location
Setup will install Accton CheetahAccess Print Server Monitor in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install Accton CheetahAccess Print Server Monitor by clicking Cancel to exit Setup.
Destination Folder
D:\...\Accton CheetahAccess Print Server
Browse...
InstallShield
< Back
Next >
Cancel

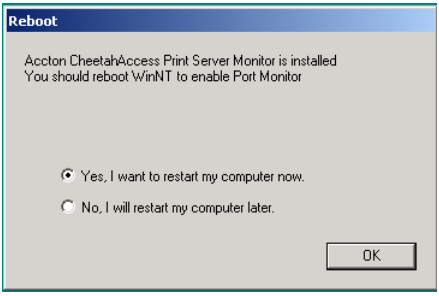
5. Select the Program Folder that will contain the program icon for uninstalling the port monitor, and then click “Next.”



6. Enter the printer port name that will be used to identify the port monitor in your system, and press “Next.”



7. When the setup program finishes installing the port monitor, select the item to restart your computer and then click “OK.”


Reboot
Accton CheetahAccess Print Server Monitor is installed
You should reboot WinNT to enable Port Monitor
Yes, I want to restart my computer now.
No, I will restart my computer later.
OK

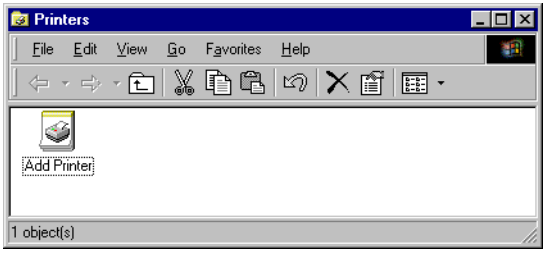
8. After rebooting your computer, add the Internet Gateway print server to your system as described in the following section.

Configure the Print Server

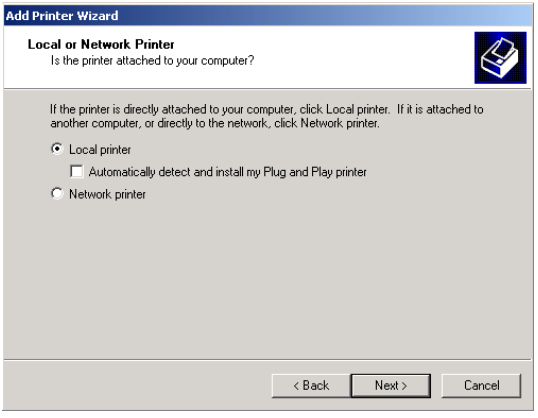
The CheetahAccess Internet Gateway's print server supports Microsoft Windows 95/98/ME/NT/2000, and Unix. If you are using Windows 95/98/ME/NT/2000, first install the port monitor as described in the previous section before adding the Internet Gateway's print server to your operating system.

Configure the Network Printer in Windows 95/98/ME/2000

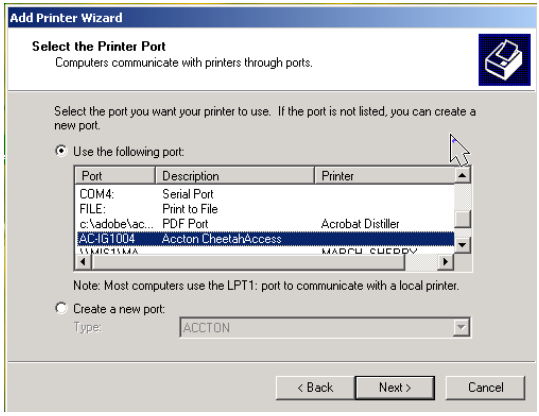
1. On a Windows 95/98/ME/2000 platform, open the Printers window in the "My Computer" menu, and double-click the "Add Printer" icon.



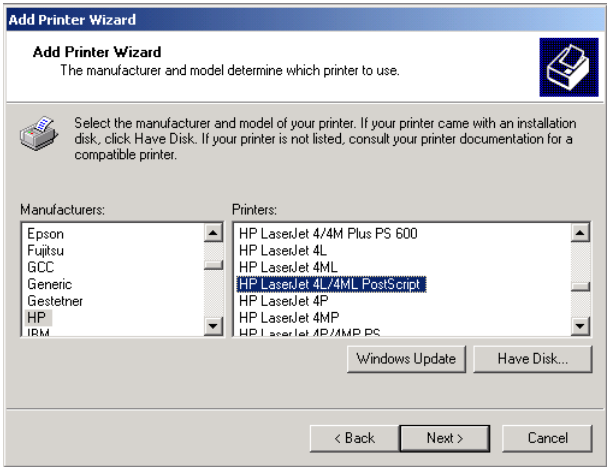
2. Follow the prompts to add a "Local printer" to your system.


Add Printer Wizard
Local or Network Printer
Is the printer attached to your computer?
If the printer is directly attached to your computer, click Local printer. If it is attached to another computer, or directly to the network, click Network printer.
Local printer
Automatically detect and install my Plug and Play printer
Network printer
< Back
Next >
Cancel

3. Select the monitored port. The default port name is “AC-IG1004” and then click “Next.”



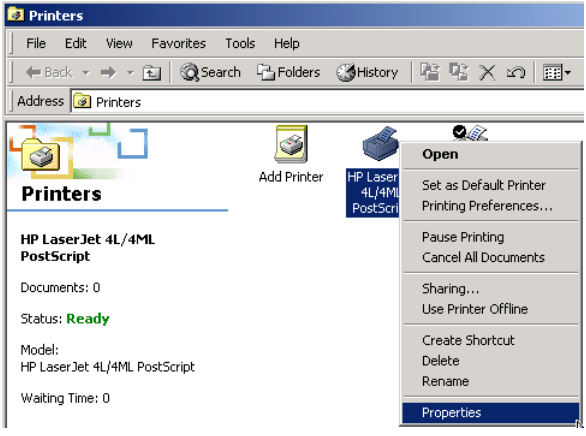
4. Specify the printer type attached to the CheetahAccess Internet Gateway, and press “Next” for each window and “Finish” when complete.

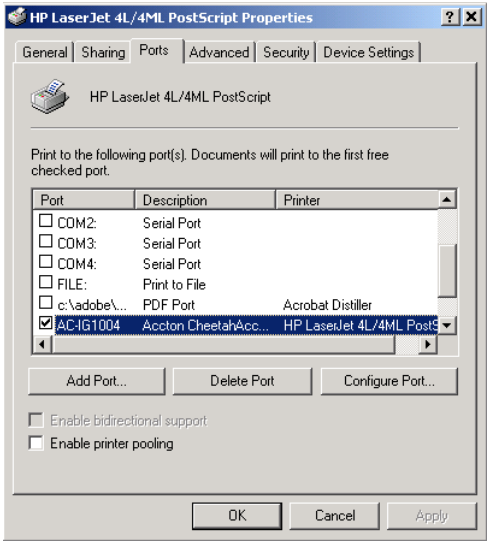

Add Printer Wizard
Add Printer Wizard
The manufacturer and model determine which printer to use.
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.
Manufacturers:
Epson
Fujitsu
GCC
Generic
Gestetner
HP
Printers:
HP LaserJet 4/4M Plus PS 600
HP LaserJet 4L
HP LaserJet 4ML
HP LaserJet 4L/4ML PostScript
HP LaserJet 4P
HP LaserJet 4MP
Windows Update
Have Disk...
< Back
Next >
Cancel

5. The printer type you specified will now be added to your “Printers” menu.

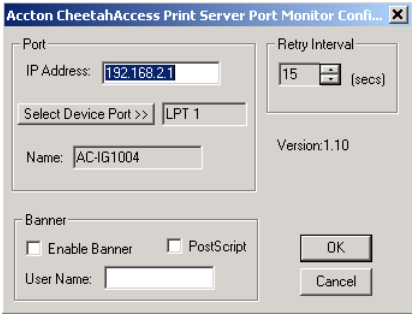
6. Open the Printers window in the “My Computer” menu, select the Internet Gateway printer icon, and click the right-mouse button of the printer icon.

7. Select “Properties” option and click “Configure Port...”




HP LaserJet 4L/4ML PostScript Properties
General Sharing Ports Advanced Security Device Settings
HP LaserJet 4L/4ML PostScript
Print to the following port(s). Documents will print to the first free checked port.
Port Description Printer
COM2: Serial Port
COM3: Serial Port
COM4: Serial Port
FILE: Print to File
c:\adobe\... PDF Port Acrobat Distiller
AC-IG1004 Accton CheetahAcc... HP LaserJet 4L/4ML PostS
Add Port... Delete Port Configure Port...
Enable bidirectional support
Enable printer pooling
OK Cancel Apply

8. Enter the IP address of the CheetahAccess Internet Gateway and click “OK” in the dialog box.

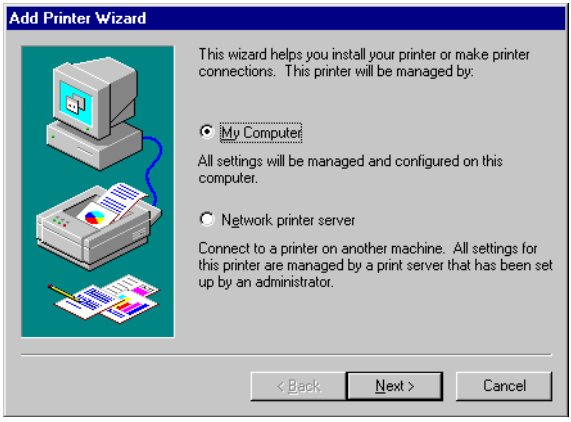


9. Continue following the prompts to finish configuring the Internet Gateway print server.

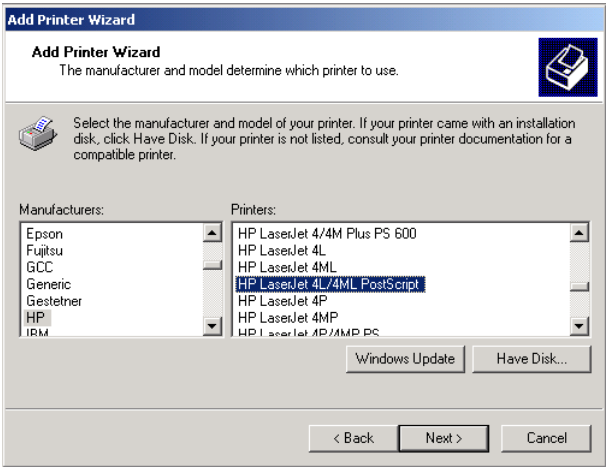
Configure the Network Printer in Windows NT

1. On a Windows NT platform, open the Printers window in the My Computer menu, and double-click the Add Printer icon.

2. Follow the prompts to add a local printer to your system.


Add Printer Wizard
This wizard helps you install your printer or make printer connections. This printer will be managed by:
My Computer
All settings will be managed and configured on this computer.
Network printer server
Connect to a printer on another machine. All settings for this printer are managed by a print server that has been set up by an administrator.
< Back
Next >
Cancel

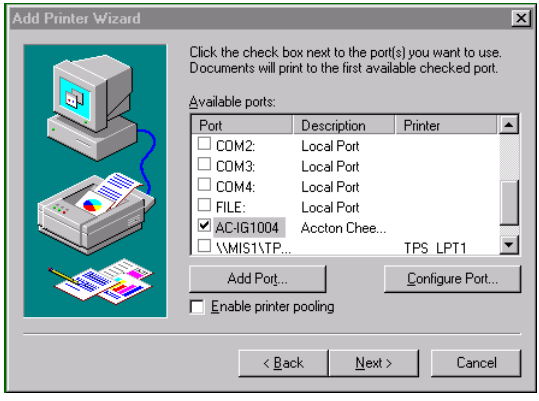
3. Specify the printer type attached to the CheetahAccess Internet Gateway, and press “Next” for each window and “Finish” when complete.


Add Printer Wizard
Add Printer Wizard
The manufacturer and model determine which printer to use.
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.
Manufacturers:
Epson
Fujitsu
GCC
Generic
Gestetner
HP
Printers:
HP LaserJet 4/4M Plus PS 600
HP LaserJet 4L
HP LaserJet 4ML
HP LaserJet 4L/4ML PostScript
HP LaserJet 4P
HP LaserJet 4MP
Windows Update
Have Disk...
< Back
Next >
Cancel

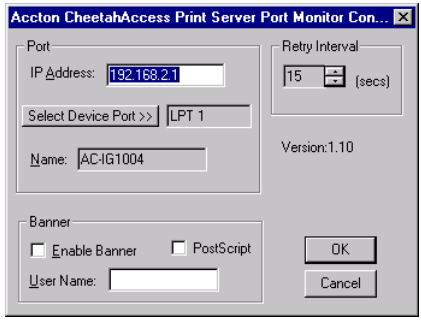
4. The printer type you specified will now be added to your “Printers” menu.

5. Open the Printers window in the My Computer menu, select the Internet Gateway printer icon, and click the right-mouse button of the printer icon.

6. Select the monitored port. The default port name is “AC-IG1004.” Then click the “Configure Port” button.



7. Enter the IP address of the CheetahAccess Internet Gateway and click “OK,” and then click “Next” in the Add Printer Wizard dialog box.



8. Continue following the prompts to finish configuring the Internet Gateway print server.

Configure the Network Printer in Unix Systems

Follow the traditional configuration procedure on Unix platforms to set up the Internet Gateway print server. The printer name is “lpt1.”

Appendix A: Troubleshooting

This appendix describes common problems you may encounter and possible solutions. The CheetahAccess Internet Gateway can be easily monitored through panel indicators to identify problems. If you cannot resolve any connection problems after checking the indicators, then refer to the other sections in the following table.

Symptom	Action
LED Indicators	
Power LED is Off	• External power supply has failed or is disconnected. • Check connections between the CheetahAccess Internet Gateway, the external power supply, and the wall outlet. • If the power indicator does not turn on when the power cord is plugged in, you may have a problem with the power outlet, power cord, or external power supply. However, if the unit powers off after running for a while, check for loose power connections, power losses or surges at the power outlet. If you still cannot isolate the problem, then the external power supply may be defective. In this case, contact Accton Technical Support for assistance.
Link LED is Off	• Verify that the CheetahAccess Internet Gateway and attached device are powered on. • Be sure the cable is plugged into both the CheetahAccess Internet Gateway and the corresponding device. • Verify that the proper cable type is used and that its length does not exceed the specified limits. • Be sure that the network interface on the attached device is configured for the proper communication speed and duplex mode. • Check the adapter on the attached device and cable connections for possible defects. Replace any defective adapter or cable if necessary.
Network Connection Problems	
Cannot Ping the CheetahAccess Internet Gateway from the attached LAN, or the CheetahAccess Internet Gateway cannot Ping any device on the attached LAN	• Verify that the IP addresses are properly configured. For most applications, you should use the CheetahAccess Internet Gateway's DHCP function to dynamically assign IP addresses to any host on the attached LAN. However, if you manually configure any IP addresses on the LAN, verify that the same network address (network component of the IP address) and subnet mask are used for both the CheetahAccess Internet Gateway and any attached LAN devices. • Be sure the device you want to Ping (or from which you are Pinging) has been configured for TCP/IP.

Symptom	Action
Management Problems	
Cannot connect using the Web browser	• Be sure you have configured the CheetahAccess Internet Gateway with a valid IP address, subnet mask and default gateway. • Check that you have a valid network connection to the CheetahAccess Internet Gateway and that the port you are using has not been disabled. • Check the network cabling between the management station and the CheetahAccess Internet Gateway.
Forgot or lost the password	• Press the Reset button on the front panel (holding it down for at least five seconds) to restore the factory defaults.
Printer Server	
The printer cannot print or prints garbage	• Make sure the parallel cable between the CheetahAccess Internet Gateway and printer is connected and is in good condition.

Appendix B: Cables

Ethernet Cable

Specifications

Cable Types and Specifications			
Cable	**Type**	**Max. Length**	**Connector**
10BASE-T	Cat. 3, 4, 5 100-ohm UTP	100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	100 m (328 ft)	RJ-45

Twisted-pair Cable

Caution: DO-NOT plug a phone jack connector into any RJ-45 port. Use only twisted-pair cables with RJ-45 connectors that conform with FCC standards.

For 10BASE-T/100BASE-TX connections, a twisted-pair cable must have two pairs of wires. Each wire pair is identified by two different colors. For example, one wire might be red and the other, red with white stripes. Also, an RJ-45 connector must be attached to both ends of the cable. All RJ-45 ports on the AC-IG1004, except for the WAN port, support automatic MDI/MDI-X configuration. This means that you can use straight-through cable to attach the LAN ports to any network device. However, when connecting the WAN port to a broadband modem, you will need to use either straight-through or crossover cable, depending on the port type used on the modem. Note that if you are using the Uplink port on the AC-IG1008, you cannot use the crossover port on Port 8.

Figure B-1 illustrates how the pins on the RJ-45 connector are numbered. Be sure to hold the connectors in the same orientation when attaching the wires to the pins.

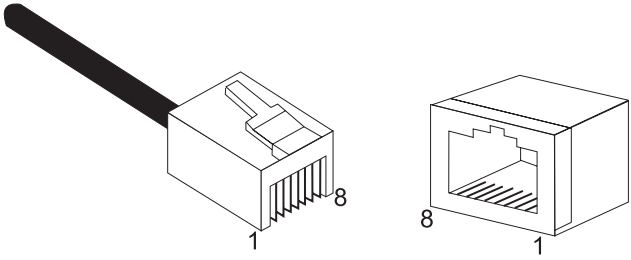


Figure B-1. RJ-45 Connector Pin Numbers

Straight-through Cable

Straight-Through RJ-45 Pin Assignments	
End 1	End 2
1 (TD+)	1 (TD+)
2 (TD-)	2 (TD-)
3 (RD+)	3 (RD+)
6 (RD-)	6 (RD-)

Pins 4, 5, 7 and 8 are not connected.

Crossover Cable

Crossover RJ-45 Pin Assignments	
End 1	End 2
1 (TD+)	3 (RD+)
2 (TD-)	6 (RD-)
3 (RD+)	1 (TD+)
6 (RD-)	2 (TD-)

Pins 4, 5, 7 and 8 are not connected.

RJ-45 Port Pin Assignments

All LAN ports on the CheetahAccess Internet Gateway support automatic MDI/MDI-X configuration. This means that the pin signals in use will depend on whether the LAN port is operating in MDI or MDI-X mode. However, the WAN port is configured only for MDI-X mode.

Pin	MDI Signal Name*	MDI-X Signal Name*
1	Transmit Data (TD+)	Receive Data (RD+)
2	Transmit Data (TD-)	Receive Data (RD-)
3	Receive Data (RD+)	Transmit Data (TD+)
6	Receive Data (RD-)	Transmit Data (RD-)

Pins 4, 5, 7 and 8 are not connected.

* The "+" and "-" signs represent the polarity of the wires that make up each wire pair.

Serial Port Pin Assignments

The DB-9 serial port on the rear panel is used to connect the CheetahAccess Internet Gateway to an ISDN TA or PSTN modem. The pin assignments used to connect to this port are provided in the following tables.

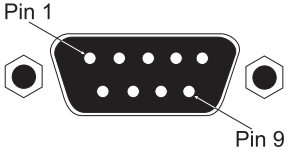


Figure B-2. DB-9 Serial Port Pin Numbers

DB-9 Port Pin Assignments

EIA Circuit	CCITT Signal	Description	Gateway's DB9 DTE Pin #	PC DB9 DTE Pin #	Modem DB25 DCE Pin #	Signal Direction DTE-DCE
CF	109	**DCD** (Data Carrier Detected)	1	1	8	<------
BB	104	**RxD** (Received Data)	2	2	3	<------
BA	103	**TxD** (Transmitted Data)	3	3	2	------>
CD	108.2	**DTR** (Data Terminal Ready)	4	4	20	------>
AB	102	**SG** (Signal Ground)	5	5	7	-------
CC	107	**DSR** (Data Set Ready)	6	6	6	<------
CA	105	**RTS** (Request-to-Send)	7	7	4	------>
CB	106	**CTS** (Clear-to-Send)	8	8	5	<------
CE	125	**RI** (Ring Indicator)	9	9	22	<------

Serial Port to 9-Pin COM Port on PC

Gateway's 9-Pin Serial Port	CCITT Signal			PC's 9-Pin COM Port
1 DCD	----------	DCD	----------	1
2 RXD	<---------	TXD	----------	3
3 TXD	----------	RXD	---------->	2
4 DTR	----------	DSR	---------->	6
5 SGND	----------	SGND	----------	5
6 DSR	----------	DTR	----------	4
7 RTS	----------	CTS	---------->	8
8 CTS	<---------	RTS	----------	7
9 RI	----------	RI	----------	9

Serial Port to 25-Pin DCE Port on Modem

Gateway's 9-Pin Serial Port	CCITT Signal			Modem's 25-Pin DCE Port
1	<---------	DCD	----------	8
2	<---------	RXD	----------	3
3	----------	TXD	---------->	2
4	----------	DTR	---------->	20
5	----------	SGND	----------	7
6	<---------	DSR	----------	6
7	----------	RTS	---------->	4
8	<---------	CTS	----------	5
9	<---------	RI	----------	22

Serial Port to 25-Pin DTE Port on PC

Gateway's 9-Pin Serial Port	Null Modem		PC's 25-Pin DTE Port
1 DCD	1	1	8 DCD
2 RXD	2	3	3 TXD
3 TXD	3	2	2 RXD
4 DTR	4	8	20 DTR
5 SGND	5	20	7 SGND
6 DSR	6	7	6 DSR
7 RTS	7	4	4 RTS
8 CTS	9	5	5 CTS
9 RI	20	6	22 RI

Printer Port Pin Assignments

The DB-25 parallel port on the CheetahAccess Internet Gateway's rear panel is used to connect the CheetahAccess Internet Gateway to a printer. When a printer is attached to this port, any PCs attached to the CheetahAccess Internet Gateway's LAN ports can pass files to the printer. The pin assignments used to connect to the printer port are provided in the following table.

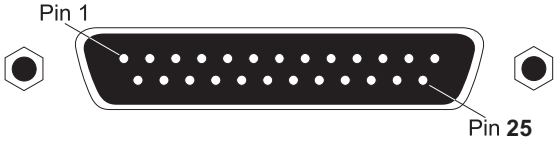


Figure B-3. DB-25 Printer Port Pin Numbers

DB-25 Printer Port Pin Assignments

Pin	Signal Name	Direction
1	-Strobe	To printer
2	+Data 0	To printer
3	+Data 1	To printer
4	+Data 2	To printer
5	+Data 3	To printer
6	+Data 4	To printer
7	+Data 5	To printer
8	+Data 6	To printer
9	+Data 7	To printer
10	- ACK	To print server
11	+ Busy	To print server
12	+ Paper End	To print server
13	+ Select	To print server
14	- Auto Feed	No connection
15	- Error	To print server
16	- Init	To printer
17	- Select	No connection
18-25	GND	Ground

Appendix C: Specifications

WAN Interface

10BASE-T/100BASE-TX, 1 RJ-45 port
Serial, 1 RS-232 DB-9 connector

Printer Interface

Parallel
1 DB-25 printer port

Management

Web management

Advanced Features

Dynamic IP Address Configuration – DHCP, DNS
Firewall – Client privileges, hacker prevention and logging
Virtual Private Network – PPTP, L2TP, IPSec pass-through
Backup Internet Connection –
    Dial-on-demand via secondary WAN port
Print server

Internet Standards

ARP (RFC 826), IP (RFC 791), ICMP (RFC 792), UDP (RFC 768), TCP (RFC 793), Telnet (RFC 854-859), MD5 (RFC 1321), BOOTP Extension (RFC 1497), PPP LCP Extension (RFC 1570), PPPoE (RFC 2516), NAT (RFC 1631), PPP (RFC 1661), HTML (RFC 1866), HTTP (RFC 1945), CHAP (RFC 1944), DHCP (RFC 2131), PPTP (RFC 2637)

Temperature

Operating: 0 to 40 °C (32 to 104 °F)
Storage: -40 to 70 °C (-40 to 158 °F)

Humidity

5% to 95% (noncondensing)

Compliances

CE Mark
Emissions
    FCC Class B
    VCCI Class B
    Industry Canada Class B
    EN55022 (CISPR 22) Class B
    C-Tick - AS/NZS 3548 (1995) Class B
    EN 61000-3-2/3
Immunity
    EN 61000-4-2/3/4/5/6/8/11
Safety
    UL 1950
    EN60950 (TÜV)
    CSA 22.2 No. 950

Warranty
Limited Lifetime

AC-IG1004

LAN Interface
10BASE-T/100BASE-TX
4 RJ-45 ports

Indicator Panel
LAN (Link, Activity), WAN (Link, Activity), Power

Dimensions
19.5 x 11.25 x 2.55 cm (7.68 x 4.43 x 1.00 in.)

Weight
0.61 kg (1.34 lbs)

Input Power
12 V (1 A)

Maximum Current
0.04 A RMS max.@110/240 V

Power Consumption
5 Watts max. @ 100-240 VAC

AC-IG1008

LAN Interface
8 RJ-45 ports
Ports 1-7:Twisted-pair, fixed crossover
Port 8: Twisted-pair, alternate MDI/MDI-X, choice between fixed crossover or straight-through (daisy-chain port)

Indicator Panel
LAN (Link, Activity), WAN (Link, Activity), Power, FDX/COL (full duplex/ collision)

Dimensions
24.92 x 11.63 x 3.66 cm (9.81 x 4.58 x 1.44 in.)

Weight
1.766 kg (3.89 lbs)

Input Power
110 to 240 VAC, 50 to 60 Hz, 0.5 A

Maximum Current
0.40 A RMS max.@110/240 V

Power Consumption
12 Watts max. @ 100-240 VAC

Appendix D: Ordering Information

CheetahAccess Internet Gateway Products	
AC-IG1004	4-port Residential Gateway - WAN/LAN/Print Server
AC-IG1008	8-port Residential Gateway - WAN/LAN/Print Server

AC-IG0004
AC-IG0008
E022002-R01
P/N: 650.10551